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*Antitrust and the Changing Corporation*





# ANTITRUST AND THE CHANGING CORPORATION

*William Lee Baldwin*

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*Preface*

"We certainly need to know more than that in its natural appearance, a trust resembles an octopus," J. B. Clark commented in 1901. This observation has been repeated in less laconic form, and in less inspired phrases, by writers down to and including the present day. The present study represents an effort to ascertain the extent to which the literature dealing with the modern business corporation, written between the 1880's and the present, contains insights into the actual form of that artificial body which may be useful in dealing with problems of antitrust enforcement. The literature is diverse: recent writers have described the modern corporation as a "solar system," a "communications network," and as possessing a "corporate conscience." In part, these modern descriptions may reflect industrial evolution upwards from a primitive octopus-like state; but to a greater extent they indicate a diversity in attitudes among students of the corporation. Nevertheless, concepts developed in this literature may be synthesized to a substantial extent; and the synthesis may be applied to the problem of describing an appropriate role for the economist in formulating antitrust policy and assisting in its enforcement.

My greatest debt is to Professor Jesse W. Markham of Princeton University, who, as chairman of my doctoral dissertation advisory committee, furnished invaluable guidance and assistance from the inception of the project, and whose encouragement has since been instrumental in raising my sights towards publication of a substantially revised version of the dissertation.

The other members of my advisory committee at Princeton were Professors Stanley E. Howard and Jacob Viner. Professor Howard read much of the original draft and, by his careful observations of looseness in thought and expression, impressed upon me at an early stage the necessity for clarity and rigor. Professor Viner read the



revised dissertation draft with care, and the present substance of the study owes much to his typically incisive and thought-provoking comments. Professor Gaston V. Rimlinger, now at the Rice Institute, read the completed dissertation and was very helpful in pointing out areas in which the study could be strengthened.

Despite my gratitude to these men, without whose contributions this work would have been far poorer, the responsibility for the presentation, the viewpoints, and errors and omissions is entirely mine.

Professor Edward J. Zabel, now with the University of Rochester, read significant portions of the manuscript and offered extremely useful suggestions and criticisms. I am similarly indebted to my colleagues at Dartmouth College, especially Professors Thomas J. Finn and John A. Menge.

Much of my research was done in the Harvey S. Firestone Memorial Library at Princeton University and the Baker Memorial Library at Dartmouth College. I also made considerable use of the facilities of the Amos Tuck School Library at Dartmouth. My acknowledgements would not be complete if I failed to note the never-failing consideration and willingness to assist, which often went beyond their formal duties, of the members of the staffs of these libraries.

The Research Committee of Dartmouth College gave financial assistance to cover expenses incurred while I was working on the manuscript.

Finally, my wife, Marcia Hurt Baldwin, has been responsible for the correction of numerous errors of form, the removal of much redundant matter, and the rewriting of some obscure or unnecessarily complicated sentences.

WILLIAM LEE BALDWIN  
*Hanover, New Hampshire*  
*November, 1960*

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*Antitrust and the Changing Corporation*





## *Chapter One: TRUST LITERATURE AND ANTITRUST POLICY BEFORE THE FIRST WORLD WAR: THE DEBATES ON LAISSEZ FAIRE, NATURALNESS, AND BIGNESS*

### *A. Introduction and Background of the Trust Movement*

Concentration of business activity poses questions which have stimulated one of the most voluminous and diversified bodies of literature in economics. In this study, viewpoints towards the large firm in the American economy will be traced by a review and discussion of outstanding features of the literature, public debate, and legal developments since the end of the nineteenth century, with emphasis on the influence of economists upon policy makers and the courts. Such a review is of importance, as it is maintained that substantial areas of agreement and reasonably consistent methods of analysis can be found within the literature, despite wide divergences of opinion as to the proper role of big business, its performance, and effective public policy to meet the phenomenon of corporate concentration. Consideration can then be given to the usefulness of present-day economics as a guide to proper enforcement of those portions of the nation's antitrust laws which deal with the large business organization.

At the outset, it should be recognized that the propensity to monopolize is not new, nor is it a phenomenon raised by modern conditions of industrialization, mass production, rapid technological advance, and the resulting accumulations of capital. The realization that price could be enhanced and additional profits made if a large enough proportion of a commodity could be controlled and withheld from the market at the seller's pleasure did not need to wait on mechanization or on the development of the concept of elasticity of demand. There are illustrations from ancient times:

In Selymbria [in Aristototele's time], for example, a law had been passed, at a time of scarcity, forbidding the export of corn; with the result that

supplies were plentiful. The government then bought in all the corn—beyond the necessary year's supply for each citizen—at a very low price fixed by decree. It then repealed the law, and was able to sell at a large profit when prices rose with the opening of the market.<sup>1</sup>

Another writer describes government monopolies of virtually all manufacturing in Ptolemaic Egypt; vegetable oils, flax, beer, nitre, alum, leather goods, papyrus paper, and aromatics, as well as ownership of a state bank.<sup>2</sup>

David Hume gives a scathing account of the grants of monopoly made by Queen Elizabeth I, and of the unfortunate, sometimes tragic, effects of the monopolies, which enabled the patent holders "to raise commodities to what price they pleased," including an increase in the price of salt from sixteen pence to fifteen shillings a bushel.<sup>3</sup>

However, industrial concentration in the United States, beginning during the latter half of the nineteenth century, had, as does any historical occurrence, particular features which distinguished it and which gave rise to new problems and new approaches to the old problems. Two of these features appeared to be particularly important and have been stressed, in one form or another, throughout the literature. First, the post Civil War trusts differed from the earlier monopolies<sup>4</sup> described above, or from familiar textbook-examples such as the medieval guilds and the great trading companies of the sixteenth and seventeenth centuries, in that they seemed to arise naturally, without governmental aid and despite

<sup>1</sup> Johannes Hasebroek, *Trade and Politics in Ancient Greece*, trans. L. M. Fraser and D. C. MacGregor (London: G. Bell & Sons Ltd., 1933), p. 148.

<sup>2</sup> M. Rostovtsev, *The Social and Economic History of the Hellenistic World* (Oxford: Clarendon Press, 1941), I, 300-314; II, 1281, 1283.

<sup>3</sup> *History of England*, IV, chap. xlv. Quoted in R. T. Ely, *Monopolies and Trusts* (New York: Macmillan Co., 1900), pp. 24-25.

<sup>4</sup> The word "trust" strictly used refers to a business form under which specified property is controlled by trustees in the interests of *cestuis* or beneficiaries. This form was frequently used in the United States in the late nineteenth century in order to avoid existing restrictions on intercorporate holdings, the *corpus* or property consisting of shares of stock of the various companies to be operated under unified management. Over time, the word came to have a wider connotation, being used to describe any large business combination, regardless of form. Here, it will be used throughout in the latter, broader, sense. Earlier definitions of the word "monopoly" stress the element of state privilege. See *Webster's New International Dictionary* (2nd ed., unabridged, 1953): "At the common law the term monopoly was specifically applied to an exclusive privilege of trade created by state grant or charter, and the term is still sometimes so used."

hostile public opinion. Secondly, they grew up in a *laissez faire*<sup>5</sup> environment, at a time when adherence to the tenets of *laissez faire* was generally recognized as being responsible for the prodigious material advances of the preceding century. These two features are fairly closely related. The first feature, although its validity was quickly challenged, led at first to the conclusion that, if the trusts were dangerous, their suppression or control by public authority raised far more complex difficulties than would have been the case if they had been dependent on government grants or encouragement. It also raised doubts as to the wisdom of interfering with an evolutionary development which seemed to be earning its place among the fittest business forms in the struggle for survival.

Faith in the efficacy of *laissez faire* also led to questioning of interference with the growth, in whatever form, of free enterprise; but, in the main, the traditions of *laissez faire* were too strongly opposed to monopoly for its adherents to accept the trusts with complete equanimity. Whether based on the writings of Adam Smith, or on eighteenth-century French physiocratic thought, *laissez faire* doctrines had grown in part out of a revulsion against earlier state-supported monopolies. Smith had warned against the danger of

<sup>5</sup> *Laissez faire* is a term colored and given emotional content by the writings of its adherents and opponents. Over time, it has signified different concepts and different policies. Thus, as initially formulated by the physiocrats, *laissez faire* implied that the "unproductive" sectors of the economy, manufacturing and commerce, should escape regulation and taxation that was more appropriately levied only against "productive" land. Adam Smith developed the concept into a doctrine of natural harmony, under which the public interest is promoted by the individual pursuing his own economic interests. With the development of the marginal theory of value, the most significant support for *laissez faire* came from the conclusion that freely expressed consumer demand should determine supply, without any interference by government with the conditions of supply. Under this last concept of *laissez faire*, which was the concept understood by most American economists during the period under consideration in this study, control of supply by a private monopolist would have been as much condemned as governmental interference. See G. D. H. Cole, "Laissez Faire," in E. R. A. Seligman, ed., *Encyclopaedia of the Social Sciences*, IX (New York: Macmillan & Co., 1933), 15-20.

Despite differences in meaning and in significance for public policy, the underlying idea of *laissez faire* can be stated. Sidney Fine, in *Laissez Faire and the General-Welfare State* (Ann Arbor: University of Michigan Press, 1956), p. vii, uses the term "to embrace the arguments of those who accepted government as a necessity but nevertheless wished to see its functions reduced to the narrowest possible limits." The basic economic assumption of this doctrine is described by Cole, *op. cit.*, p. 15, "that the economic affairs of society will in the main take care of themselves if neither the state nor any other body armed with coercive authority attempts to interfere with their working as determined by the individual actions of men."



price squeezing inherent in monopoly, and against conspiracy, and had advised strict limitations on the use of the corporate form.<sup>6</sup>

The type of monopoly that had been so abhorrent to the earlier proponents of *laissez faire*, and that had been prohibited in the constitutions of several of our states,<sup>7</sup> was monopoly created by express action of the state. The explanation for the growth of the new monopolies did not seem difficult to find: if the government did not grant monopoly powers, then almost the same result could be achieved by agreement and collusion among the firms of an industry;<sup>8</sup> and such conniving apparently became easier as the nation became industrialized and firms grew larger under the impact of a new technology which seemingly demanded size as a condition of efficiency.<sup>9</sup>

For a time, academic economists seemed almost unconcerned with the trust movement, or hesitant to comment. Scholars were concerned, immediately after the Civil War, with some of the more flagrant aspects of stock market speculation and manipulation. Following the Credit Mobilier scandal and the decision in *Munn*

<sup>6</sup> Adam Smith, *The Wealth of Nations*, ed. E. Cannan (New York: Modern Library, 1937), pp. 61, 128, 437.

<sup>7</sup> For example, Section I of the Connecticut Constitution of 1818 reads, "We declare, That all men when they form a social contract are equal in rights; and that no man or set of men are entitled to exclusive public emoluments or privileges from the community." The constitutions of several states contain a section reading, "Perpetuities and Monopolies are contrary to the genius of a free State, and ought not to be allowed" (e.g., Sec. 31, North Carolina). Cited from U. S. Industrial Commission, *Trusts and Industrial Combinations*, Vol. II of the Commission's Reports (Washington: Government Printing Office, 1900), pp. 77, 192.

<sup>8</sup> The definition of monopoly changed to meet these conditions. Ely (*Monopolies and Trusts*, p. 14), after a discussion of the changing usage of the word, proposed the following definition: "Monopoly means that substantial unity of action on the part of one or more persons engaged in some kind of business which gives exclusive control, more particularly, though not solely, with respect to price." On page 32 this definition is expanded to include the concept of a "partial monopoly," having some, but not complete, control over price.

<sup>9</sup> Some simple indices of size of firm and capital intensity are shown in the table below. Computed from data in U. S. Bureau of Statistics, Department of Commerce and Labor, *Statistical Abstract of the United States 1903* (Washington: Government Printing Office, 1904), p. 526.

*U. S. Industrial Firms*

| <i>Year</i> | (a) <i>no. employed/no.<br/>of firms</i> | (b) <i>capital/no.<br/>of firms</i> | (c) <i>capital per<br/>employee, (b/a)</i> |
|-------------|------------------------------------------|-------------------------------------|--------------------------------------------|
| 1880        | 11                                       | \$10,985                            | \$ 999                                     |
| 1890        | 12                                       | 18,380                              | 1,532                                      |
| 1900        | 10                                       | 19,168                              | 1,917                                      |



v. *Illinois* in 1876 recognizing the rate-regulating rights of the various states, much discussion arose concerning the railroads. A good part of this took the form of comments on the rights of private property as opposed to the need for public regulation; but as C. J. Bullock noted, interest in the effects of such practices as railroad pooling agreements led to a flurry of concern. "Discussion of the monopoly question in the United States seems to have begun early in the seventies," Bullock observed, "when popular dissatisfaction arose concerning railroad rates and management. Then, for a time, an occasional article in some periodical indicated only a fitful interest in the subject, until early in the eighties the formation of the Diamond Match Company and the Standard Oil Trust caused a livelier discussion of the problem of monopoly."<sup>10</sup> The burning issues for economists during the first two decades after the Civil War grew out of tariff and monetary questions. When the monopoly problem was raised, it was generally dismissed as being amenable to solution by competition or public opinion. "Often," Joseph Dorfman commented in reference to this period, "these academic economists had accurate insights; and there can be little question of their serious concern with the national welfare; but the excitement of the times and the terrific hold of tradition made them peculiarly impervious to the stresses and strains developing in the American economy."<sup>11</sup>

### B. *Naturalness and Social Darwinism as Applied to the Trusts*

In an article appearing in 1901, Bullock surveyed the trust literature, noting in an introductory paragraph:

An incomplete bibliographical summary shows that fifteen treatises or reports of official investigations and over thirty-five noticeable articles in the chief periodicals appeared between 1887 and 1890. For the next six years the output diminished, probably for the reason that the tariff and the money questions were uppermost in the public mind; and only eight books or reports and hardly more than a score of articles were published during the period. In 1897 and 1898 at least six books or pamphlets and about thirty articles appeared, foreshadowing an increased

<sup>10</sup> "Trust Literature: A Survey and a Criticism," *Quarterly Journal of Economics*, XV (Feb., 1901), 167-168.

<sup>11</sup> *The Economic Mind in American Civilization*, III, 1865-1918 (New York: Viking Press, 1949), especially chaps. ii and iii, and p. 82.

interest in the problem of monopoly. And finally, the last two years have given us not less than twenty-eight books, reports, and pamphlets, together with a flood of periodical articles that will reach probably one hundred and fifty titles when the returns for 1900 have all been received.<sup>12</sup>

Many of the noted economists of the later nineteenth and early twentieth centuries held firmly to the idea that the growth of the trusts was natural. Foremost among these was Professor Jeremiah W. Jenks of Cornell, author of several books and articles in the field, and Expert Agent for the U. S. Industrial Commission. Jenks was greatly concerned with the wastes of competition,<sup>13</sup> and with the economies made possible by large-scale enterprise. In 1906 he wrote:

No one now questions the advantages to production which flow from industry carried on on a large scale. Only great establishments can get the best equipment for cheap production; only such can secure the ablest men throughout the entire industry in the places for which they are best adapted; only such can make the enormous savings in the cost of selling goods which comes from doing away with the competitive bidding of travelling men and with costly advertising. *If the industry is practically consolidated*, so that the only need for advertising is to let purchasers know where and how goods can be found and what the qualities of these goods are, the saving may be made of all the competitive advertising that simply turns the consumer from one establishment to another without giving him any added advantage. . . . In many an instance, if this expense of competitive selling could be saved, the product might be sold for half the price.<sup>14</sup>

Jenks had great faith in the ability of competitive forces, either actual or threatened, to deal with the trust movement and believed that publicity was the only remedy which the government need apply in the field.

Jenks also scorned the popular fear and hatred of monopolies, and opposed efforts to combat the trust movement by antitrust legislation. In a late edition (1917) of his book *The Trust Problem*, Jenks reviewed the history of state and federal antitrust laws and constitutional provisions, including numerous illustrations from

<sup>12</sup> *Op. cit.*, p. 168.

<sup>13</sup> J. W. Jenks, *The Trust Problem* (New York: McClure, Phillips & Co., 1900), chap. ii.

<sup>14</sup> *Great Fortunes; The Winning; The Using* (New York: McClure, Phillips & Co., 1906), pp. 45-46. Italics mine.

political debates and party platforms, all designed to show how the politicians had pandered to and influenced an ill-informed public opinion by virulent attacks on the trusts.<sup>15</sup> Following this review, Jenks gave his own opinion on the matter:

There must be maintained a fair and open field for industrial competition to do its full work. That the field be fair, cunning promotions, local price-cutting, personal and local rebates, factors' agreements, and the like must cease. That the field be open, anti-pooling clauses for railways and antimonopoly clauses for industrials must go, too. *In the fair field, no competitor's growth must be checked even though complete monopoly come.*

In the national field kept thus, both fair and open, full monopoly may not win out in many lines of industry. It may not win out in any line. If full monopoly does win out in any line, that will be proof that it is the sought-for cost-cheapening unit. Whenever and in whatever industry this may be proved, the public mind then and there may see that competition is dead and should be buried to the music of suitable praise for its past service to man. To fight monopoly, then, to try to quicken dead competition, then, would mean that democracy was listing itself with the weavers who vainly strove against the new loom, the stage drivers who threw themselves before the locomotive, and all others who have futilely sought to stop the march of cost-cheapeners. Honest cost-cheapeners come to stay. This is a lesson of economic history which democracy needs to know and to apply.

"Monopoly" and "monopolist" must not be allowed to frighten great, maturing democracy. Rather in the fair field, kept deliberately open, let the honest cost-cheapening monopoly be welcomed, if it come. It will be gigantic—nation wide in its power *and in its service*.<sup>16</sup>

Jenks had little to say about output, except that it should be increased by the increased efficiency of larger units. For Jenks, the main dangers of the trust were to investors, and the remedy, publicity.

W. M. Collier, New York State Civil Service Commissioner, made a careful distinction between the trusts, which he felt were the vehicles of economic progress, and monopolies, which he regarded as great evils. The distinction made by Collier seems to rest mainly on power over price. He did not believe that a trust would, for any length of time, be able to maintain unfairly high prices in the

<sup>15</sup> 4th ed., New York: Doubleday, Page & Co., 1917; with the collaboration of W. E. Clark, chaps. xiii, xiv.

<sup>16</sup> *Ibid.*, pp. 275-276. Italics as in original.



face of potential competition, no matter how large a percentage of the existing industry the trust might control. Monopoly, in his opinion, was created only by legislative favoritism and could survive only by governmental support. Collier felt that the great economic threat to the United States was overproduction, with its resulting depressions and unemployment, and that the trusts could make a very valuable contribution here by stabilizing output. He recognized potentialities for evil in the trusts, but believed that publicity was the key remedy.<sup>17</sup>

Two other economists who accepted the idea that trusts were natural forms which had evolved almost inexorably from an earlier stage of laissez-faire capitalism were C. W. Baker and Ernst von Halle. Baker, in a rather remarkable book, *Monopolies and the People*, argued that competition carried, within itself, the seeds of its own destruction. As soon as a firm got beyond the stage represented by farming, to the point where it could, within limits, set a price for its own product, it would engage in direct combat with its competitors. Abuses such as sales below cost would cut off profits until attrition or a general awareness of the situation brought in many cases agreement and combination. For Baker, legislation designed to restore a competitive order was foredoomed to failure. He advocated legislation which would legalize agreements and contracts in restraint of trade provided that they were made public, and proposed a law under which government officials would sit on the boards of directors of the trusts.<sup>18</sup>

Von Halle noted the peculiar genius of the industrial leaders of the day—their dynamism, individualism, and organizational abilities—with apparent approval. He felt that the trusts were, on the whole, highly beneficial. He pointed to price studies other than Jenks's, especially one by George Gunton, which indicated that the

<sup>17</sup> *The Trusts* (New York: Baker & Taylor Co., 1900).

<sup>18</sup> 3rd ed.; New York: G. P. Putnam's Sons, 1899. I have termed this book "remarkable" for its modernity. Baker, in his chapter on modern competition, in which he describes how competition inexorably gives rise to concentration and agreement, distinguishes types of competition in a manner very close to the present-day distinctions as to pure and perfect competition, imperfect or monopolistic competition, and monopoly. He is also quite modern in his attack on the idea that competition leads to overproduction, and he gives restrictions on production as the great evil of the trust movement. Baker is also quite interesting in his discussion of the effects of unequal income distribution, for which he held the trusts responsible, on aggregate consumption, coming very close to stating explicitly the idea of a consumption function and a multiplier.

trusts had actually lowered prices through increased operating efficiency; and he refused to commit himself to any position on this topic, while expressing a strong belief that the trusts could not raise prices or profits to an exorbitant level for fear of potential competition. He advocated repeal of the antitrust laws, as they "prescribe[d] things simply impossible." Of the trusts, he said, "They come because they must."<sup>19</sup>

The writers cited above were typical of the very influential group which accepted the proposition that the trusts were a natural development and that they were to become a permanent feature of the American economy. Some expressed a faith in competition to restrain the trusts from abuse of their powers; others, like Baker, felt that competition as a regulating force was dead and that another power, probably governmental, would have to guide the nation's economic destiny in the future.

However, this idea of natural growth was challenged vigorously. The men noted above were ready to concede that the trusts had been aided by governmental grants such as those embodied in the patent laws, liberal availability of the corporate form, and tariff protection; but they felt that the trust movement would have occurred with or without such special encouragements. Among the earliest to argue that the trust was a creature of special privilege was P. De Rousiers, a Frenchman who traveled through the United States in 1897 for the stated objective of determining to what extent the trust movement here was inevitable, and if it were not, how the countries of Europe could best avoid similar experiences. De Rousiers distinguished carefully between concentration of production, under which competition conceivably remained, and monopoly, which destroyed competition and which was the goal of the trusts. Such monopoly power, he felt, was always artificial. Standard Oil, for example, needed the complicity of the railroads in receiving preferential rates and rebates in order to monopolize the oil business, and the sugar trust was formed only with the assistance of an enormous tariff. Europe, he feared, was heading in the same direction, as governments there sanctioned and upheld cartel agreements. The remedy, for De Rousiers, was simple: get rid of all of the artificial props. But the United States seemed determined,

<sup>19</sup> *Trusts; Or Industrial Combinations and Coalitions in the United States* (New York: Macmillan & Co., 1895), pp. 147, 143.



through the antitrust laws, to take the opposite course and establish still further artificial conditions. Such laws, De Rousiers argued, served only to fetter initiative without offering the public any protection against exploitation by existing trusts.<sup>20</sup>

Richard T. Ely of Wisconsin was another who felt that the trusts were bolstered up by artificial supports, both private and public. He argued that, except for a few "natural" monopolies in fields such as railroading and communications, where competition was obviously wasteful and impractical as a regulator, and in areas where the monopoly was based on ownership of a limited raw material, it was impossible to achieve and maintain monopoly without special privilege.<sup>21</sup> He cited De Rousiers's work with approval, and also that of Professor Lexis, a German scholar who classified all sellers' monopolies under two categories, natural and artificial. "Mere combination by itself (not even if aided by a large mass of capital) Professor Lexis maintains, cannot establish monopoly," Ely noted. "That is a position which the present writer has long taken and upheld against the writings of Professor J. W. Jenks and some other economists, and he is glad to have such strong support."<sup>22</sup> Professor Ely stressed the power of a monopoly to determine price, giving a detailed numerical example of how the quantity demanded might change with changes in price, and how the monopoly would seek to set that price which maximized its total profits, and not the highest possible price. Although Ely had very little to say in the way of comment on restriction of output, his stress on rational price policies make his approach to the trust problem seem more analytical and detached than that of, say, Jenks or von Halle.

As remedies for the trust problem, Ely urged better public education, in order that the public might recognize the real issues involved; better regulation of franchises for the natural monopolies; an inheritance tax, designed to block too great a concentration of personal wealth; reform in patent and tariff law, such as to remove the artificial props to monopoly; and a reform of corporation law, including a federal bureau of corporations.

If all the artificial supports were removed, Ely believed, then the

<sup>20</sup> *Les Industries Monopolisées (Trusts) Aux Etats-Unis* (Paris: Armand Colin et Cie., 1898).

<sup>21</sup> *Monopolies and Trusts*, *passim*.

<sup>22</sup> *Ibid.*, pp. 87-88.

trusts could not achieve monopoly powers and would, instead, bring beneficial developments of increased efficiency and economies of large scale. Thus for Ely as for De Rousiers, the antitrust laws were impediments to progress and should be repealed.

We can now see the positions in which investigation of this one apparent distinguishing feature of the American trust movement, namely its natural, virtually inevitable occurrence, had placed students by the turn of the century. Some of those who characterized the movement as inevitable and evolutionary, notably Jenks, held to a faith that, in the long run, the competitive forces inherent in a *laissez-faire*, free society would solve any problems that might arise; while others, such as Baker, felt that the rise of the trusts presaged the end of competition and the rise of a new economic system. On the other hand, writers such as De Rousiers and Ely, who felt that the great industrial empires of their time were, as the older monopolies, creatures of special privilege, held firmly to a faith in competition and *laissez faire*. Proponents of both positions could at least agree on one point; the antitrust laws were absurd or useless and should be repealed.

The most immediately apparent weakness in this debate over the naturalness of the trust movement is that it came too late. Even if writers such as De Rousiers and Ely were correct in believing that the trusts were formed only with the aid of lax state laws, competition for chartering revenues, and tariff and patent protection, they now seem unduly optimistic in assuming that the trusts would simply collapse when the artificial supports were removed. There was little concern with the methods by which the trusts had entrenched themselves, with the stability of the positions they had obtained, or with appropriate methods to dislodge them.

Such a debate could have arisen only among scholars who were influenced strongly by the philosophy of *laissez faire*. Whether or not the development was natural would have been completely irrelevant to Jenks, Collier, von Halle, and Baker unless they were concerned over the argument that a natural movement must also be a beneficial one. Von Halle, for example, was not a proponent of *laissez faire*,<sup>23</sup> yet he advocated repeal of the antitrust laws

<sup>23</sup> In criticism of *laissez faire*, von Halle stated, "Advocates of this principle certainly fall into their own trap when they cry out for restrictions against things that have naturally developed, and for state interference to secure 'the unhindered

solely on the ground that they stood in the way of what he envisaged as an inevitable economic development. De Rousiers and Ely disagreed with the conclusion that the trust movement was to be welcomed primarily because they had a different opinion as to precisely what constituted the natural order.

The writers, with the single exception of Baker, were very little concerned with problems of production. Although they occasionally observed that the trusts tended to restrict output, they did not seem to regard this restriction as among the more serious dangers of the trust movement. Collier, to the contrary, considered such behavior to be a socially useful check against overproduction. The economic evil, as these men envisaged it, was increased prices. They were all aware that if the firm sought to maximize its profits its efforts would lead to higher prices and lower output when it had achieved monopolistic power. Yet the men who believed that the trusts were natural insisted that the tendency to raise prices would be offset by increased economies of scale. Such a conviction was a necessary corollary to the propositions of *laissez faire*.

As long as the belief remained that an evolutionary development of business form and structure would almost certainly be a beneficial one, economists could contribute little to the nation's antitrust policy. Such a belief might have stemmed not only from *laissez-faire* economics, but also from the then popular doctrine of Social Darwinism.

Social Darwinism, in essence, sought to apply the principle of natural selection to social phenomena. This principle underlies the theory of progressive biological evolution, which describes and predicts ever more complex and somehow "better" species developing over time as a result of the struggle for survival. According to Social Darwinist thought, natural selection should also operate to promote higher and more effective human institutions and, hopefully, a stronger and more intelligent human race. From this belief the conclusion followed that social progress would be most stimulated by permitting the fullest possible freedom for the natural forces which would assure the triumph of the fitter over the less fit.

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working of natural forces' " (*op. cit.*, p. xi). His own escape from this trap was rather cautious and qualified advocacy of public supervision of the trusts in the form of a uniform commercial code for the United States.



Social Darwinism developed almost in entirety out of the writings of Herbert Spencer. Several years before Charles Darwin and A. R. Wallace had published their first ideas on biological evolution, Spencer had introduced the phrase "survival of the fittest" to social literature.<sup>24</sup> In the American edition of *The Study of Sociology*, Spencer gives what is perhaps his most concise account of the workings of biological evolution in human society. Spencer does not merely draw an analogy or parallel between biological evolution and social development. In his thought, rather, human life is subject to precisely the same "general biological truth" as are all other forms of life. "I refer," he stated, "to the truth that every species of organism, including the human, is always adapting itself, both directly and indirectly, to its conditions of existence."<sup>25</sup> Both society and its individual members undergo this adaptation.

From the point of view of economic analysis, and its role in the defense of the trust movement, the most immediately significant feature of Spencer's philosophy was neither the evolution of society as a whole nor that of the human species, but rather the evolution of social institutions, particularly business organizations. Spencer specifically notes the existence of such a phenomenon:

Not only has a society as a whole a power of growth and development, but each institution set up in it has the like—draws to itself units of the society and nutriment for them, and tends ever to multiply and ramify. Indeed, the instinct of self-preservation in each institution soon becomes dominant over everything else; and maintains it when it performs some quite other function than that intended, or no function at all.<sup>26</sup>

"It was impossible," Richard Hofstadter has observed in commenting on the American scene, "to be active in any field of intellectual work in the three decades after the Civil War without mastering Spencer. . . . The sales of Spencer's books in America from their earliest publication in the sixties to December 1903 came to 368,755 volumes, a figure probably unparalleled for works in such difficult spheres as philosophy and sociology."<sup>27</sup>

<sup>24</sup> Richard Hofstadter, *Social Darwinism in American Thought, 1860-1915* (Philadelphia: University of Pennsylvania Press, 1944), p. 26. Hofstadter notes an 1852 *Westminster Review* article as the first in which Spencer made use of the phrase.

<sup>25</sup> New York: D. Appleton & Co., 1874, p. 346.

<sup>26</sup> *Ibid.*, p. 19.

<sup>27</sup> *Op. cit.*, pp. 20-21.



An early convert to Social Darwinism who used the Spencerian philosophy for an enthusiastic defense of the American trust movement was Andrew Carnegie. In 1889 Carnegie wrote an article, "Wealth," for the *North American Review*<sup>28</sup> which was hailed by that magazine's editor as the finest article he had ever published in the *Review*.<sup>29</sup> Referring to the "law" of competition, Carnegie enthusiastically stated:

It is here; we cannot evade it; no substitutes for it have been found; and while the law may be sometimes hard for the individual, it is best for the race, because it insures the survival of the fittest in every department. We accept and welcome, therefore, as conditions to which we must accommodate ourselves, great inequality of environment, the concentration of business, industrial and commercial, in the hands of a few, and the law of competition between these, as being not only beneficial, but essential for the future progress of the race.<sup>30</sup>

For Carnegie, social evolution promised great benefits for the poor as well as the rich, by raising productivity and standards of living throughout society. The survival of the fittest, thus, should not operate to eliminate the poor, but to ameliorate their condition. Carnegie, in fact, envisaged the rich as trustees for the poor. Yet he condemned any charity which did not encourage the poor to help themselves:

He is the only true reformer who is as careful and as anxious not to aid the unworthy as he is to aid the worthy, and, perhaps, even more so, for in alms-giving more injury is probably done by rewarding vice than by relieving virtue.<sup>31</sup>

Perhaps the most noted and influential American disciple of Herbert Spencer was William Graham Sumner, Professor of Political and Social Science at Yale College. "The thing," observed Sumner, "which makes and breaks institutions is economic forces, acting on the interests of men, and, through them, on human nature."<sup>32</sup> From this assumption, it followed that the trusts had grown up in response to economic forces. Further, for Sumner, any such evolution-

<sup>28</sup> CXLVIII (June, 1889), 653-664. Reprinted in Gail Kennedy, *Democracy and the Gospel of Wealth* (Boston: D. C. Heath, 1949), pp. 1-8.

<sup>29</sup> Ralph H. Gabriel, *The Course of American Democratic Thought; An Intellectual History Since 1815* (New York: Ronald Press, 1940), p. 145.

<sup>30</sup> Kennedy, *op. cit.*, p. 2.

<sup>31</sup> *Ibid.*, p. 8.

<sup>32</sup> "Social War in Democracy" (1889), in A. G. Keller and M. R. Davie, eds., *Essays of William Graham Sumner* (2 vols.; New Haven: Yale University Press, 1934), II, 244.

any development was necessarily beneficial, and any efforts to hamper or modify a natural development would be harmful.

In regard to the first point, Sumner argued that the progress of civilization has been based on perpetual accumulation of capital in amounts which have always been relatively large in given situations. This fact of accumulation was as true for primitive societies which succeeded, in which chieftains controlled virtually all the available capital, as for modern society. Sumner observed:

Stated in the concisest terms, the phenomenon is that of a more perfect integration of all societal functions. To concentration of power (wealth), more dominant control, intenser discipline, and stricter methods are but modes of securing more perfect integration. When we perceive this we see that the concentration of wealth is but one feature of a grand step in societal evolution.<sup>33</sup>

Sumner expressed his beliefs in the beneficial nature of industrial concentration and in the fruitlessness of efforts to reduce concentration in the following statement:

Modern civilization is built upon machines and natural agents, brought into play through machines, that is, through capital. Herein lies the true emancipation of men and the true abolition of slavery. Then come these two questions: (1) can we keep the advantages and comforts of a high civilization, based on capital, while attacking the social institutions by which the creation of capital is secured? (2) are we prepared to give up the comforts of civilization rather than continue to pay the price of them? No one who forms his judgments on a study of facts can answer the first question in the affirmative; no one who is familiar with current thought will say that people are prepared to give an affirmative answer to the second.<sup>34</sup>

Yet the most interesting aspect of Social Darwinism, in terms of the present review of economic analyses of business concentration, is the fact that it had very little influence on economists concerned with the trust movement. Sumner, although brought to Yale as a professor of political economy, turned to politics and sociology. His interest in the trust movement was never more than peripheral to his major concern with the "science of society."<sup>35</sup> Most modern

<sup>33</sup> "The Concentration of Wealth: Its Economic Justification" (1902), *ibid.*, II, 164.

<sup>34</sup> "Another Chapter on Monopoly" (1888), *ibid.*, I, 403.

<sup>35</sup> See Gabriel, *op. cit.*, pp. 237-250 for an account of Sumner's intellectual development.

writers, if forced to place Sumner in a category, would call him a sociologist rather than an economist.<sup>36</sup>

Hofstadter suggests that most economists felt that their discipline had previously incorporated all of the significant ideas then being derived from biological evolution in other social sciences. Such scholars, presumably, simply ignored Social Darwinism because it neither challenged their system nor added to it.

There would seem to be two other features of the intellectual atmosphere surrounding economic thought near the end of the century which led to the refusal to embrace Social Darwinism. Economics of the 1880's and 1890's was strongly influenced by religious sentiment. The concept of a "Christian economics" was current,<sup>37</sup> and many of the noted economists were active in church affairs, some as ordained ministers. A devout Christian economist could very well accept survival of the fittest as a principle of competition, as many did; but such a man might, at the same time, refuse to regard biological evolution as the general condition of which economic competition was merely a special case, particularly if his individual religious scruples biased him against the doctrine of evolution.

Second, and perhaps of more importance, economic theory was evidently superior to the theory of Social Darwinism in one vital respect. *Laissez faire*, as developed by the "classical" economists, possessed a detailed rationale designed to demonstrate that social benefit would assuredly flow from free competition and self-interest in the economic sphere. The results could be predicted from the assumptions. Social Darwinism had no such logic. Even if one accepted the evolutionary process and natural selection as true in describing the development of more and more complex species adapting to their environments, it did not necessarily follow either that the same principles insured continued improvement in human institutions or that the results were morally or ethically "better." This objection had particular force when one recognized that the human animal, alone or in a group, had unparalleled power to modify its environment. Thus, one could hold as a fundamental

<sup>36</sup> See, for example, Kennedy, *op. cit.*, p. vii; Hofstadter, *op. cit.*, p. 40; and Dorfman, *op. cit.*, p. 68.

<sup>37</sup> For discussions of "Christian economics," see Dorfman, *op. cit.*, pp. 57, 194-205; and Hofstadter, *op. cit.*, p. 88.



proposition, based on apparently sound demonstration, that anything which was natural in economic activity must be good, but reject the broader principle that everything in the world and society which evolved naturally must also be good. This position seems clearly illustrated in J. W. Jenks's attitude.

Jenks, in the following quotation, appears as much a Social Darwinist as Spencer or Sumner:

Under the competitive system, each cares for his own. The one who shows on the whole the greatest power of self-reliance, self-direction, and skill—the fittest—is the one who, in the competitive struggle, survives. As his weaker rivals fall out, the plane of efficiency is elevated and the whole industrial structure is raised. This competitive struggle among individuals may be cruel in its effects upon those who lose, but from the strictly economic point of view it, so far at least, has generally seemed best for society, inasmuch as it has resulted in the success of the one most fit whenever the competition has been legal and just.<sup>38</sup>

Yet, in the same book, Jenks curtly dismissed Social Darwinism:

An effort has been made to explain these Trusts, and not to rest content with calling them the product of evolution, and assuming that, therefore, they are both inevitable and in the long run helpful rather than harmful. In a letter written but a few days before his death, the late Gen. Francis A. Walker, commenting upon this fatalistic attitude of some of his friends who were satisfied to call Trusts the product of evolution, remarked that he supposed the modern train robber was merely a normal development of the old-fashioned, commonplace highwayman, and continued: "Some evolution is worthy of only condemnation. Some evolutionists ought to be hanged." With that view of economic evolution, as something requiring further explanation before being either approved or condemned, the book has been written.<sup>39</sup>

C. W. Baker's approach was quite different. After enumerating a series of "laws" of competition and after applying his laws to an evolutionary schema, Baker concluded, "The monopolies of to-day are a natural outgrowth of the laws of modern competition, and they are as actually a result of the application of steam, electricity, and machinery to the service of man, as are our factories and railways." But Baker denied that trusts and monopolies were necessarily good because they were natural. On the contrary, he insisted that monopolies were "great evils." The problem, for Baker, was

<sup>38</sup> *The Trust Problem* (revised ed.), p. 195.

<sup>39</sup> *Ibid.*, pp. 8-9.



how to regulate monopolies and channel their forces to the public welfare. Natural developments could, he thought, be controlled. But they could not be abolished. To Baker, attempts to bring about greater competition by reducing the size and increasing the number of competing units were "nonsense."<sup>40</sup>

Ernst von Halle, who, as noted above, commented that the trusts came because they must, avoided dogmatism on the question of the beneficial results of this natural development. He stated that, in his opinion, the trust movement would probably turn out for the good of society, but he made no appeal to any universal law. Rather, he stated simply, "No definite judgment about the trust question is possible as yet. It is too recent, and its phases undergo rapid and constant changes." Yet von Halle's empiricism was not complete. He also noted:

Marx is mistaken in saying that the development of society has been caused exclusively by economic forces. But doubtless an attempt to interfere with economic forces for the sake of general principles is not very promising to-day. It must either remain unsuccessful, or turn out disastrous to the nation which passes through it.<sup>41</sup>

The attitudes towards Social Darwinism of writers such as Ely and De Rousiers are not of significance to their work on the trusts, since they did not regard the trust movement as natural in the first place. However, it may be mentioned in passing that Ely was strongly opposed to Spencer's ideas.<sup>42</sup>

The only one of the writers cited in the preceding portion of this section who appears to have accepted Social Darwinism was W. M. Collier. At least, Collier evidently held competition to be a special case of the general law of survival of the fittest when he wrote the following:

Large production is usually cheap production. The large competitor has an advantage in the struggle. He is more apt to win than is his small and weak competitor. It is only an exemplification of nature's cruel law, the survival of the fittest; and of the pitiless economic law: "To him that hath shall be given, and from him that hath not shall be taken even that which he hath"; and of that dogma of social despair, "The destruction of the poor is his poverty." Thank God that there are

<sup>40</sup> *Op. cit.*, pp. 160, 161.

<sup>41</sup> *Op. cit.*, pp. 141, 143.

<sup>42</sup> Hofstadter, *op. cit.*, pp. 21, 125.

exceptions! Yet we can make no progress without recognizing the stubborn, though cruel facts.<sup>43</sup>

Yet even Collier sought to defend the trusts at length in terms of their effects on price and production, so that the claim of evolutionary development was superfluous to his argument.

Thus, in addition to the fact, cited by Hofstadter, that Social Darwinism in the main bolstered classical economic theory and its policy implications, there appear to be positive reasons why the doctrines of Spencer and Sumner had little influence on economists' views of the trust movement. The criticisms of Social Darwinism and the sources from which it was successfully attacked in the twentieth century need not concern us here. Far more important to economic analysis of business concentration was the earlier and concurrent onslaught against the principle of *laissez faire*.

### *C. Attacks on Laissez faire*

Joseph Dorfman has described the revolt against *laissez faire* as the most notable feature of economic thought during the 1880's, culminating in the formation of the American Economic Association. He quotes J. B. Clark as describing the group to be formed as "a Political Economy Club on a rather progressive basis," to consist of "younger men who do not believe implicitly in *laissez faire* doctrines, nor the use of the deductive method exclusively." S. N. Patten is quoted as noting that the "very object of our association should be to deny the right of individuals to do as they please, and that, of course, is restricting trade." Dorfman summarizes the movement as follows:

Primarily the Association was, as Patten later asserted, a protest against the narrow conventional English economics as well as the traditional self-satisfied political and social ideas in America. Many economists regarded the formation of the American Economic Association as a declaration of emancipation from narrow economic dogmatism.<sup>44</sup>

Soon, however, the revolutionary tone was dampened, and by the 1890's most of the respectable academic economists were joining the American Economic Association.

<sup>43</sup> *Op. cit.*, pp. 41-42.

<sup>44</sup> Dorfman, *op. cit.*, pp. 206, 207, 209.

John Bates Clark may be cited as one of the great leaders of the new group. In 1886 Clark, in *The Philosophy of Wealth*, launched a severe attack on competition and laissez faire alike. He described three degrees of competitive conditions: first, conservative competition of the sort that economists "of a few years ago" envisaged as harmonizing social interests; second, cut-throat competition which led to the eventual extermination of some or most of the rivals; and third, combination producing a monopoly which was tempered only by latent competition. Individual competition had disappeared in many important areas, and rightly so, he maintained, as it had failed to operate with justice. "The system of individualistic competition," he stated, "was a tolerated and regulated reign of force; solidarity, even in its present crude state, presents the beginnings of a reign of law."<sup>45</sup> Cut-throat competition, Clark feared, was leading to monopoly; and the object of monopoly was to raise price by reducing production. He advocated in this book a new economic order which was to be generated by combinations of workmen co-operating intelligently with their employers for the benefit of all, a new and vitalized trade ethics which would condemn profits from exchange as opposed to profits from production, a new awakening of social consciousness, and a breaking down of class barriers within the church without which genuine co-operation could not succeed.

By 1901, however, Clark had made a very clear distinction between a laissez-faire society and a competitive one. He rejected the former, which meant for him "leaving growing monopolies and their occasional rivals to fight it out as best they can."<sup>46</sup> Under laissez faire the three most harmful weapons of the trusts remained untouched; namely, local discriminations in price; discriminations, perhaps on a nationwide basis, between different grades of goods in cases where only one grade was challenged by competition; and refusal to sell to certain potential buyers. These devices, and preferential treatment of some by the railroads, would have to be checked by legislation. After that, actual or potential competition could be relied on to control abuses. Clark at this time was opposed to the antitrust laws, as he hoped that by his program the

<sup>45</sup> Boston: Ginn & Co., 1886, pp. 120, 148.

<sup>46</sup> *The Control of Trusts* (New York: Macmillan Co., 1901), p. 86.



nation could retain the advantages of concentrated production, yet avoid the evils of monopoly. Concerning these laws, he observed:

Unless we can "fool all of the people all the time," we shall be forced sooner or later to change this policy [crushing the trusts]; for the people will have laws that not only sound well, but work well. In order to obtain them, the first step is to get a more thorough knowledge of the facts concerning trusts and their operations. We certainly need to know more than that in its natural appearance, a trust resembles an octopus.<sup>47</sup>

Severe criticism may be leveled at the inadequacies in the literature of the first decade of the 1900's and its preoccupation with the evolutionary aspect of the merger wave. George Stigler has commented caustically on the economists of the early 1900's:

It is sobering to reflect on the attitudes of professional economists of the period toward the merger movement. Economists as wise as Taussig, as incisive as Fisher, as fond of competition as Clark and Fetter, insisted upon discussing the movement largely or exclusively in terms of industrial evolution and the economies of scale. They found no difficulty in treating the unregulated corporation as a natural phenomenon, nor were they bothered that the economies of scale should spring forth suddenly and simultaneously in an enormous variety of industries—and yet pass over the minor firms that characteristically persisted and indeed flourished in these industries. Ida Tarbell and Henry Demarest Lloyd did more than the American Economic Association to foster the policy of competition.<sup>48</sup>

Factually, Stigler's observation is apt. Fisher, in 1912, felt that, although generally a monopoly price would be higher than that set under competition, in many cases the prices would be lower because of reductions in cost resulting from the monopoly. "Such economies in cost," he stated, "come from getting rid of duplications in plant, management, and advertising, and by having the advantages in general of large-scale production." These cost reductions, Fisher continued, might well lead to a descending supply curve, indicating that the largest firm in the industry could supply the existing market or any increase in the market at a lower cost than could its smaller rivals. Such a supply curve plus large invested

<sup>47</sup> *Ibid.*, p. 12.

<sup>48</sup> "Monopoly and Oligopoly by Merger," Papers and Proceedings of the Sixty-second Annual Meeting of the American Economic Association, *American Economic Review*, XL, no. 2 (May, 1950), 30-31.



capital comprised, for Fisher, necessary elements leading to monopoly. Fisher felt that the tendency of his day was more and more towards this type of production, and that legislation should aim at control of monopolies and combinations, rather than at the restoration of competition.<sup>49</sup>

Taussig, in his well-known *Principles of Economics*, discusses the economies of large-scale production, stressing economies in management and the elimination of competitive wastes.<sup>50</sup> But his attitude towards the combinations is a cautious one:

In this state of uncertainty concerning some essential elements in the problem—such as the gain in efficiency from large-scale management, the potency of unfair competition, the mitigation of cyclical fluctuations—there is inevitably a lack of agreement concerning appropriate legislation. The underlying question of all is disputed: shall there be acceptance and regulation (or at least expectation of regulation), as in Germany, or stern repression, as in the United States? Even if the latter policy be considered settled, troublesome questions arise concerning the method of applying it, and the incidental practices which may be permitted or regulated. For the time being, something like a Fabian policy is alone practicable.<sup>51</sup>

As a criticism, Stigler's comment seems rather unfair. Problems of monopoly and concentration were not the major interests of either Fisher or Taussig, and the best summaries of their opinions come from their textbooks. From the beginnings of the trust movement in, say, the 1870's through the first decade of the twentieth century, great economies were achieved, the management function was studied and organized with new efficiency, and technical innovations wrought revolutions in production. The promise of substantial operating and managerial economies would provide a stimulus to consolidation that the economic theorist would find difficult to condemn, especially without adequate statistical material and Stigler's advantage of hindsight. Far from passing over the minor firms which survived and even flourished, economists regarded them as essential bulwarks against abuses by the trusts. Their continued existence, perhaps made possible only by adaptation of pro-

<sup>49</sup> Irving Fisher, *Elementary Principles of Economics* (New York: Macmillan Co., 1912), pp. 330, 332.

<sup>50</sup> F. W. Taussig, *Principles of Economics* (3rd ed., New York: Macmillan Co., 1921), I, 60-64; II, 193-195.

<sup>51</sup> *Ibid.*, II, 458.

duction processes originated by the trusts, bolstered the economist's faith in competition.

It is important to keep in mind that, although Clark, Fisher, and Taussig were perfectly willing to abandon the philosophy of laissez faire, they, and most other academic economists, retained a strong faith in competition, at least in the industrial sector of the economy. They no longer assumed, however, that competition of the most beneficial sort would inevitably arise nor did they categorically deny the need for some governmental encouragement to competition and regulation of certain types of business behavior. In 1914, this attitude was reflected in legislation when Congress passed the Federal Trade Commission Act and the Clayton Act.

#### D. Early Bases of Antitrust Policy

The early development of antitrust policy has been analyzed by J. D. Clark,<sup>52</sup> by Oswald Knauth,<sup>53</sup> and, more recently, by William L. Letwin<sup>54</sup> and by Hans B. Thorelli.<sup>55</sup> There are marked differences among these writers as to the extent of popular feeling against the trusts just prior to the passage of the Sherman Act. Knauth, whose study is the earliest of the four and a pioneering effort, noted a "host of articles" which "flooded" the magazines during the late 1880's and commented that, "They were almost unanimously of a character to arouse popular fear of the new form of industrial organization which at this time was being adopted."<sup>56</sup>

Clark, eighteen years later, took direct issue with Knauth, arguing that there was not great public interest in the trust problem and that Knauth had simply "gathered a handful of eye-catching titles." Clark found one or two articles a year on the subject in individual publications; and he cited as further evidence of his position the hasty, almost casual passage of the Sherman Act, and

<sup>52</sup> *The Federal Trust Policy* (Baltimore: Johns Hopkins Press, 1931).

<sup>53</sup> "The Policy of the United States towards Industrial Monopoly," *Studies in History, Economics and Public Law*, No. 2 (Whole No. 138), edited by the Faculty of Political Science of Columbia University, LVI (New York: Columbia University, 1913), 175-404.

<sup>54</sup> "Congress and the Sherman Antitrust Law: 1887-1890," *University of Chicago Law Review*, XXIII, no. 2 (Winter, 1956), 221-258.

<sup>55</sup> *The Federal Antitrust Policy; Origination of an American Tradition* (Baltimore: Johns Hopkins Press, 1955).

<sup>56</sup> "The Policy of the United States. . .," p. 188.

the fact that Senator Sherman had devoted only four pages of "hasty history" to the passage of the bill in his autobiography.<sup>57</sup>

Thorelli, whose book demonstrates painstaking research in original sources, found Clark to be in error. There were, he noted, at least five articles a year on the trust problem in the *North American Review* from 1887 to 1890, and at least three in both the *Forum* and *Harper's Review*. Thorelli further found frequent antimonopoly allusions in the New York press, indicating, to his mind, "continuous interest. . . at least from the beginning of 1888 straight down to the time when the Sherman Act was passed."<sup>58</sup> However, many of these allusions were comments supplementing articles whose main topics were not the trust problem and hence would not be indexed as such. Thorelli felt, nevertheless, that Clark performed a distinct service in dispelling the idea that the popular media were deluged with antimonopoly writings. Thorelli concluded his discussion by observing that his survey indicates enough popular interest in the trust question by the end of the 1880's to make some sort of federal action politically imperative.

Letwin's article is perhaps the most perceptive analysis of public feeling towards monopoly just prior to passage of the Sherman Act, and of the importance of public sentiment to the Congress. Letwin first noted that if the legislators believed that public opinion was aroused and strongly hostile to the trust movement, such a conviction would be an effective stimulus to action whether or not it was grounded on fact. By citing the comments of several prominent people in diverse positions, he showed convincingly that belief in a great popular sentiment was widespread among leaders and the molders of opinion. Writing independently of Thorelli at approximately the same time, Letwin also found that Clark had understated the volume of published condemnation of the trust movement; but Letwin commented that a truer measure of the importance of the monopoly problem in public opinion would be found in the extent to which it colored political issues of the time. In the late 1880's, he noted, attacks on trusts pervaded debates on tariff issues, railroad problems, labor unions, farm income, and the causes of poverty. Popular fear and mistrust of monopoly, Letwin observed, had formed a continuing thread weaving through political

<sup>57</sup> J. D. Clark, *op. cit.*, pp. 31, 53.

<sup>58</sup> *Op. cit.*, pp. 137, 141.



issues from the time of the framing of state and federal constitutions until the period of trust formation. Feelings which had earlier been aroused over governmental grant of monopoly privileges, over the First and Second Banks of the United States, over the privileges of the corporation, and over public control of the railroads were merely revived by the trust movement of the 1880's. "The great fervor against trusts in 1888," Letwin concluded, "which bursts so unexpectedly on an historian like Clark, was for the people living at the time nothing so sudden or strange. It was simply a familiar feeling raised to a high pitch, intense because the speed with which new trusts were being hatched made it seem that they would soon overrun everything unless some remedy were found soon."<sup>59</sup>

Evidently, Clark was unduly influenced by simple quantitative evidence such as the number of articles or pages listed in an index. This suspicion is bolstered by a reading of the relevant four pages of Sherman's autobiography in which the Senator stated, "This law may not be sufficient to control and prevent such combinations, but, if not, the evil produced by them will lead to effective legislation. *I know of no object of greater importance to the people.*"<sup>60</sup> The description "hasty history" seems a most unfair description of this portion of the autobiography.

Whatever the degree of popular concern over the trusts, congressional debates on antitrust legislation seem to indicate that concern was not over general oppression, but rather over unfair discrimination, unethical conduct, undue power, and an unreasonable distribution of income.

For example, Clark cites Senator Cullom, in 1886, as saying in a debate on the Interstate Commerce Act:

An examination of the report and testimony will not show that railroad corporations are making too much money, or that the average rates of transportation are too high. On the other hand they have been in the main unprofitable, and transportation between competing points in America is the cheapest in the world. The complaints of the people is [*sic*] of discrimination, uncertainty, and secret injury.<sup>61</sup>

<sup>59</sup> "Congress and the Sherman Antitrust Law: 1887-1890," p. 235.

<sup>60</sup> John Sherman, *Recollections of Forty Years in the House, Senate, and Cabinet. An Autobiography* (2 vols.; New York: Werner Co., 1895), II, 1076. Italics mine.

<sup>61</sup> *Op. cit.*, p. 22. See also Clark's discussion of the debate in the House, pp. 18-21.



Senator Sherman emphasized equality of opportunity and the problems arising from great inequalities in income. In a speech to the Senate on March 21, 1890, he stated:

It is the right of every man to work, labor, and produce in any lawful vocation, and to transport his production on equal terms and conditions and under like circumstances. This is industrial liberty, and it lies at the foundation of the equality of all rights and privileges.<sup>62</sup>

During the same speech, Sherman observed:

The popular mind is agitated with problems that may disturb social order, and among them all none is more threatening than the inequality of condition, of wealth, and opportunity that has grown within a single generation out of the concentration of capital into vast combinations to control production and trade and to break down competition.<sup>63</sup>

Senator George, although opposed to the Sherman bill on grounds of constitutionality, also emphasized the destruction of small competitors:

By the use of this organized force of wealth and money the small men engaged in competition with them are crushed out, and that is the great evil at which all this legislation ought to be directed.<sup>64</sup>

Price and production policies of the trusts were not ignored. Senator Sherman, in introducing his original bill in 1888,<sup>65</sup> stated that the trusts tended "to prevent full and free competition" and "to advance the cost to the consumer of any such articles."<sup>66</sup> However, Sherman seemed to regard the restrictions on output and increases in price primarily as problems related to the protection of the small businessman and preservation of an equitable income distribution, and only secondarily as evils in their own right. In his autobiography, Sherman noted:

<sup>62</sup> Sherman, *op. cit.*, II, 1073.

<sup>63</sup> Cited in Thorelli, *op. cit.*, p. 180.

<sup>64</sup> Cited in J. D. Clark, *op. cit.*, p. 46.

<sup>65</sup> The platforms of both the Democratic and Republican parties in 1888 declared opposition to the trusts. From July, 1888, to December, 1889, Senator Sherman introduced a number of antitrust bills. The law finally enacted was drafted in April, 1890, by the Senate Judiciary Committee as a complete revision of one of Senator Sherman's bills. Five days were devoted to debate on this measure in the Senate. Senator Sherman explicitly approved the revision of his bill, and indicated his support of it. The bill was passed by the Senate with only one dissenting vote. Whoever the author or authors of the Judiciary Committee's draft were, Senator Sherman was evidently the moving spirit behind the act bearing his name. See J. D. Clark, *op. cit.*, pp. 27-51, and Knauth, "The Policy of the United States. . . .," pp. 193-216.

<sup>66</sup> Cited in Thorelli, *op. cit.*, p. 169.

They [the trusts] are organized to prevent competition and to advance prices and profits. Usually the capital of several corporations, often of different states, is combined into a single corporation, and sometimes this is placed under the control of one man. The power of this combination is used to prevent and destroy all competition, and in many cases this has been successful, which has resulted in enormous fortunes and sometimes a large advance in prices to the consumer.<sup>67</sup>

At one point in the debate Sherman read, to indicate his complete endorsement, a statement by Senator George, reading in part:

These trusts and combinations are great wrongs to the people. They have invaded many of the most important branches of business. They operate with a double-edged sword. They increase beyond reason the cost of the necessities of life and business and they decrease the cost of raw material, the farm products of the country. They regulate prices at their will, depress the price of what they buy, and increase the price of what they sell. They aggregate to themselves great enormous wealth by extortion, which makes the people poor.<sup>68</sup>

The debate on the Sherman bill in the Senate revolved primarily around effective and constitutional means to accomplish the accepted end of checking the trust evil. Only two Senators spoke in favor of the trusts; all other speakers indicated their general acceptance of the attitudes expressed by Senators Sherman and George. The opposition to an antitrust law, expressed by Senators Stewart and Platt, took the form of upholding the right of business or labor to combine in order to improve their conditions, and an attack on competition as "brutal warfare, and injurious to the whole country."<sup>69</sup> In the House debate Representative Wilson argued that overproduction had made the formation of trusts virtually a necessity for business survival.<sup>70</sup>

Thorelli, in reviewing Congressional intent and ideology in the passage of the Sherman Act, argued that undoubtedly Congress felt that the consumer would be the ultimate beneficiary of the legislation, but probably the small business proprietor was the immediate beneficiary in mind.<sup>71</sup> He goes on to say:

<sup>67</sup> *Op. cit.*, II, 1075-1076.

<sup>68</sup> Cited in Knauth, "The Policy of the United States. . .," p. 197.

<sup>69</sup> Thorelli, *op. cit.*, p. 198.

<sup>70</sup> Knauth, "The Policy of the United States. . .," p. 211.

<sup>71</sup> For an interesting contrast, see Canada, Parliament, House of Commons, *Report of the Select Committee Appointed 29th February, 1888, to Investigate and Report upon Alleged Combinations in Manufactures, Trade and Insurance in Canada* (Ottawa: MacLean, Roger & Co., 1888). The Canadian report shows less con-

Perhaps we are even justified in saying that the Sherman Act is not to be viewed exclusively as an expression of economic policy. In safeguarding rights of the "common man" in business "equal" to those of the evolving more "ruthless" and impersonal forms of enterprise the Sherman Act embodies what is to be characterized as an eminently "social" purpose.<sup>72</sup>

One journalist, shortly after the passage of the Sherman Act, not only expressed doubt as to the intensity of popular opposition to the trusts, but welcomed the seeming weakness of the antitrust law. George Gunton, editor of *Gunton's Magazine*, was in favor of both labor and industrial organization. He felt that unemployment resulting from overproduction and from unplanned introduction of new machinery was the worst evil of modern industrial society. In this context, he welcomed the trusts:

The tendency of the concentration of productive capital is one of the most effective, if not the only, means of remedying this constant social calamity. In the first place, the larger the investment of capital the greater the loss from any interruption of productive activity. The expenses are so enormous that a short stoppage in many instances would more than neutralize the profits of a whole year. Consequently, the larger the concern the greater the effort accurately to adjust its productive capacity to the market demand for its product, so as to avoid loss from interruption. Industrial depressions can never be eliminated until the relation of productive enterprise to consumption is reduced to some degree of intelligent precision, which the small go-as-you-please producer can never do.<sup>73</sup>

Gunton had nothing but contempt for the antitrust movement, which he believed to be inspired by a small group of disgruntled capitalists and a larger number of political demagogues. It was obvious to him that the trust magnates did not control legislatures; but, rather, the legislatures vied with each other in attempting to restrict the trusts. "Yet," he noted, "the trusts march on and the laws step one side, because in not one case out of a hundred is it possible to show that they are combinations 'in restraint of trade.'"<sup>74</sup>

cern over the plight of the small businessman and far more emphasis on exploitation of the consumer than does the record of the congressional debate.

<sup>72</sup> *Op. cit.*, p. 227.

<sup>73</sup> George Gunton, "Large Aggregations of Capital," *Trusts and the Public* (New York: D. Appleton & Co., 1899), pp. 78-79. Reprinted from *New York Independent* of March 4, 1897, and *Gunton's Magazine*, May, 1897.

<sup>74</sup> "Powers and Perils of the New Trusts," *ibid.*, p. 189, reprinted from *Gunton's Magazine*, June, 1899.



The United States courts early recognized that Congress had intended far more than protection of the consumer. In the *Trans-Missouri Freight Association* case, the Supreme Court dealt ruthlessly with the defense that the combination had been beneficial to the railroads' customers:

Trade or commerce under those circumstances may nevertheless be badly and unfortunately restrained by driving out of business the small dealers and worthy men whose lives have been spent therein, and who might be unable to readjust themselves to their altered surroundings. Here reduction in the price of the commodity dealt in might be dearly paid for by the ruin of such a class, and the absorption of control over one commodity by an all-powerful combination of capital.<sup>75</sup>

Roughly one decade after the passage of the Sherman Act, diverse opinions on the trust problem were expressed and publicized during two conferences held in Chicago in 1899 and 1900, and before the U. S. Industrial Commission in 1899, 1900, and 1901.

Principal speakers at the first Chicago conference, held in September, 1899, under the auspices of the Civic Federation, were J. B. Clark, W. Bourke Cockran, and William Jennings Bryan. Economists participating, in addition to Clark, included Taussig, H. C. Adams, J. W. Jenks, and E. W. Bemis. George Gunton also spoke.<sup>76</sup>

In a review of this conference, H. R. Hatfield<sup>77</sup> reported considerable diversity of opinion on the question of the harmfulness of the trust movement. Much of the confusion, he observed, arose from the lack of a generally acceptable definition of the trust, but Hatfield felt that the debate hinged on two questions: first, whether consolidation cheapened production; and second, granting the first, whether the gain was worth the transfer of self-employed small businessmen into the employ of large concerns. There was virtually unanimous agreement that combinations did cheapen production. Clark and Cockran also answered the second question in the trusts' favor, arguing that the profit-motivated actions of even the most powerful industrial magnates, barring complete monopoly and the absence of potential competition, were socially beneficial. The gist of the opposition, led by Bryan, was that the trusts promoted

<sup>75</sup> *U. S. v. Trans-Missouri Freight Association*, 166 U. S. 290 (1897), at p. 323.

<sup>76</sup> Chicago Conference on Trusts, 1899, *Speeches, Debates, Resolutions* (Chicago, 1900).

<sup>77</sup> "The Chicago Trust Conference," *Journal of Political Economy*, VIII, no. 1 (Dec., 1899), 1-18.



political corruption and the collapse of democracy. There was, apparently, little concern with price and production policies. Some speakers praised the antitrust laws for promoting equality of opportunity.<sup>78</sup>

With the exception of H. C. Adams, there was complete agreement among the economists "that the modern system of large business establishments was the outgrowth of natural industrial evolution."<sup>79</sup> There is nothing to indicate that the economists made use of their particular training and abilities to make a significant contribution to the direction of the conference. Negatively, Taussig and Bemis attacked the antitrust laws as hastily formulated and harmful legislation.

The 1900 conference, sponsored by an organization known as the American Antitrust League, was called for the purpose of organizing a national movement, "having for its object the uprooting of the whole Trust System." Invitations were sent to those "named to us [the League] as a citizen of public spirit, sincerely opposed to monopolies and special privilege, including what are commonly known as 'Trusts.'"<sup>80</sup> The record of this conference reads far more like that of a political rally or revivalist meeting than that of a concerted effort to arrive at an intelligent solution to a complex social and economic problem or to provide useful and reasoned recommendations for public policy. Yet it is a useful reference in the present context as an indication of the nature of the evils attributed to the trusts.

Much the larger part of the condemnation of the trusts was couched in terms of tyranny, oppression, and slavery, and dire warnings were given again and again of the trusts encroaching on the powers of government through corruption and bribery. Several of the speakers, advocating public ownership of the trusts, expressed their approval of concentration. "Our grievance against the trust," one speaker said, "is mainly founded on the fact that we ourselves are on the outside."<sup>81</sup> In this same vein, former Governor Altgeld of Illinois commented:

<sup>78</sup> Thorelli, *op. cit.*, pp. 335-337. See also Hatfield, *op. cit.*, *passim*.

<sup>79</sup> Hatfield, *op. cit.*, p. 6.

<sup>80</sup> National Anti-Trust Conference, Chicago, 1900, *Official Report* (Chicago: G. S. Bowen & Son, 1900), p. 7.

<sup>81</sup> "Address of Hon. Samuel M. Jones," *ibid.*, p. 276.

In all of these cases if the people got the benefit of the monopoly it would be a blessing because the monopoly can cheapen production and improve the service. But so long as the monopoly is in the hands of a few individuals, the public is absolutely in their power.<sup>82</sup>

The economics profession was represented by J. R. Commons and E. W. Bemis, both of whom confined themselves to advocating measures designed to remove the causes of trust formation, among the most important of which they considered the banking monopoly, freight discriminations, and the protective tariff. Neither addressed himself to the evils of concentration.

Only one speaker put primary stress on exploitation of the consumer, stating, "Their [the trusts'] primary and sole objective is to control production, eliminate competition, and advance prices."<sup>83</sup> He regarded the increased prices as an inevitable result of overcapitalization.

An evident weakness of both Chicago conferences is that the leaders of the trust movement were represented at neither. However, in 1899, 1900, and 1901, before the U. S. Industrial Commission,<sup>84</sup> several prominent industrialists and promoters gave testimony. Among these were J. B. Duke, J. D. Archbold, C. R. Flint, J. P. Dill, C. M. Schwab, H. O. Havemyer, and J. D. Rockefeller. Although J. W. Jenks served as Expert Agent for the Commission and the Commission made use of economic assistance, no economists gave testimony in the trust hearings.

Witnesses hostile to the trusts stressed overcapitalization as an important evil, because, they testified, efforts to pay dividends on excessive stock issues were responsible for higher prices and lower wages. Despite testimony to the effect that capitalization had nothing to do with earning power and could in no way influence prices charged to the consumer, the Commission concluded:

The position seems well taken that the methods of promotion and financiering are often decidedly against public interest and ought to be

<sup>82</sup> "Address of Ex-Gov. John P. Altgeld," *ibid.*, p. 307.

<sup>83</sup> "Address of H. L. Chaffee," *ibid.*, p. 152.

<sup>84</sup> The U. S. Industrial Commission was established by act of Congress in 1898, to investigate and report to the Congress on questions pertaining to immigration, labor, agriculture, and manufacturing. Its membership included several Representatives and Senators. The Commission was dissolved in February, 1902, after holding extensive hearings.

checked. The overcapitalization, too, is probably felt somewhat in increased prices at times.<sup>85</sup>

Other evils cited by hostile witnesses were freight discriminations, discharge of employees, and adverse social effects arising from the displacement of independent managers. Freight discriminations were described and condemned most strongly by an independent oil producer who testified that he had suffered as a result of favoritism shown the Standard Oil Company by railroads. The witness who stressed discharge of employees was president of the Commercial Travelers' National League.

Testimony as to the price policies of the trusts indicates clearly that one of the objectives of trust formation was to raise prices. Most outspoken was the testimony of H. O. Havemyer:

Q. Well, say it [cost of reproduction of refineries of the American Sugar Refining Company] was fifty millions; even it up. That leaves \$25,000,000 which seems to stand for good will, brands, etc. Do you think it fair that the consumer should pay a dividend to your company on these brands, good will, etc.?—A. I think it fair to get out of the consumer all you can, consistent with the business proposition.

Q. You state that as an ethical position before the commission, and you have to stand on that ethical position for fair play. Now, I want to know if you think—you stated that the consumer received the benefits of this consolidation of industry—it a fair ethical proposition, independent of the business view you put on it, that the consumers should pay dividends on this \$25,000,000 of overcapitalization?—A. I do not care two cents for your ethics. I do not know enough of them to apply them.

Q. Well, as a business proposition, is it right?—A. As a business proposition it is right to get all out of business that you possibly can.<sup>86</sup>

Archbold of Standard Oil answered evasively to a series of pointed questions as to whether Standard Oil had the power to set its prices above the competitive level, but admitted that such was the company's aim.<sup>87</sup> Gates, of the American Steel and Wire Company, admitted that, if there had been several establishments each controlling only 15 to 25 per cent of production, prices would have been lower than they in fact were in a situation in which his firm controlled 85 per cent of production.<sup>88</sup>

<sup>85</sup> U. S. Industrial Commission, "Review of the Evidence," *Preliminary Report on Trusts and Industrial Combinations*, Vol. I of the Commission's Reports (Washington: Government Printing Office, 1900), p. 13.

<sup>86</sup> "Hearings Before the Industrial Commission," *ibid.*, p. 118.

<sup>87</sup> *Ibid.*, p. 569.

<sup>88</sup> *Ibid.*, p. 1033.



In its review of the evidence, Volume I of the Commission's reports cited, among the evils of the trusts, their ability to raise prices when they achieved more or less complete monopolistic control, "to the great detriment of the public."<sup>89</sup> This volume, however, also included a price study by J. W. Jenks which was inconclusive as to the actual effect of combinations on prices. The Commission was also concerned with price cutting and with arbitrary price shifts which were designed to destroy or embarrass competitors.

Conceding that "Experience proves that industrial combinations have become fixtures in our business life,"<sup>90</sup> the Commission confined its recommendations to a plea for further enforced publicity.

Volume XIII, appearing in 1901, was devoted to further hearings on the trust question. In this volume there is a large amount of testimony as to the pricing practices of the trusts; but the witnesses were virtually unanimous in declaring the inability of the trusts to raise prices above competitive levels and in pointing out the omnipresence of competition in industry.<sup>91</sup> The main dissenting voice was that of G. Hillyer of Atlanta, who, as member of the Board of Water Commissioners and former mayor of that city, had had direct experience with the cast iron pipe agreement condemned in the *Addyston Pipe and Steel* case.<sup>92</sup> Hillyer testified that, in his opinion, the reason for combinations was generally to raise prices. Yet Hillyer's main condemnation of the trusts, whatever their purposes, was that they menaced political independence and tended to corrupt the government. Congressman R. W. Tayler repeated the argument that the trusts were forced to raise prices in order to pay dividends on excessive security issues.

C. R. Flint testified, in favor of the trusts:

Where there are a large number of concerns that are competing without any general understanding or plan, there is a tendency to overproduction, with the result that markets become demoralized. Overproduction is a breeder of panics, and failures result. When these in-

<sup>89</sup> *Ibid.*, p. 34.

<sup>90</sup> U. S. Industrial Commission, I, *ibid.*, 5.

<sup>91</sup> U. S. Industrial Commission, *Report of the Industrial Commission on Trusts and Industrial Combinations*, Vol. XIII of the Commission's Reports (Washington: Government Printing Office, 1901). See testimony of: Flint, pp. 89-90; Chapman, p. 110; Waterbury, p. 132; Taylor, p. 155; Burn, pp. 301, 304; Lee, p. 344; Butler, pp. 491-492; Hopkins, p. 513; Atkinson, p. 534; and Gunton, pp. 627, 635.

<sup>92</sup> *U. S. v. Addyston Pipe and Steel Company*, 175 U. S. 211 (1899).



terests are combined, production is regulated to the requirements of the country to a large extent.<sup>93</sup>

The Commission stated that, in the main, the testimony confirmed conclusions reached in the earlier report. In summarizing evils of the trust movement, the Commission cited political power and corruption before price increases. A short section on prices was devoted mainly to reviewing testimony to the effect that the trusts could not raise prices above competitive levels. The closing of factories was discussed inconclusively, being regarded as having both the evil effect of increasing unemployment and the beneficial effect of reducing costs.

Knauth, Clark, and Thorelli alike have characterized the period from the passage of the Sherman Act in 1890 until 1901, when T. R. Roosevelt became President of the United States upon the death of McKinley, as an era in which the antitrust laws were left unused by the executive branch of the government. Certainly it was true that the combination movement continued at an increasing pace during these years.

Thorelli's most important contribution is a painstaking examination of the years prior to Roosevelt's inauguration. He refers to the "lukewarmness or indifference"<sup>94</sup> of the administrations, but analyzes the period as an important one in which basic questions of antitrust policy were placed before the courts. These were questions deciding the constitutionality of the Sherman Law, whether it applied to all attempts to monopolize regardless of legal form, whether it included railroads and labor unions, and whether it applied to all restraints or only to unreasonable ones. By 1903, Thorelli concludes, with the establishment of the Bureau of Corporations, the passage of an Expediting Act to encourage speedy appeal of antitrust cases to the Supreme Court, and direct appropriations for antitrust enforcement, "antitrust became institutionalized."<sup>95</sup>

With increased action in the courts, there was a correspondingly increased appeal to the public on the parts of Presidents Roosevelt and Wilson. Both men published their opinions, taken primarily from their public speeches, in book form.<sup>96</sup>

<sup>93</sup> U. S. Industrial Commission, *Report of the Industrial Commission on Trusts and Industrial Combinations*, XIII, 35. See also p. 92.

<sup>94</sup> *Op. cit.*, p. 607.

<sup>95</sup> *Ibid.*, p. 560.

<sup>96</sup> Theodore Roosevelt, *The Roosevelt Policy*, with introduction by Andrew Car-

Roosevelt stated:

Swindling in stocks, corrupting legislatures, making fortunes by the inflation of securities, by wrecking railroads, by destroying competitors by rebates—these forms of wrong-doing in the capitalist, are far more infamous than any ordinary form of embezzlement or forgery; yet it is a matter of extreme difficulty to secure the punishment of the men most guilty of them, most responsible for them.<sup>97</sup>

Yet Roosevelt stated unequivocally, "I am in no sense hostile to corporations." He believed that great social benefits could be obtained from concentrations of capital and from the "wealth of intellect, energy and fidelity devoted to their service, and therefore normally to the service of the public, by their officers and directors."<sup>98</sup>

President Taft's attitude was similar. Writing in 1914, he stated, "I conceive that nothing could happen more destructive to the prosperity of this country than the loss of that great economy in production which has been and will be effected in all manufacturing lines by the employment of large capital under one management."<sup>99</sup>

Roosevelt alluded again and again to overcapitalization, which he evidently regarded as the chief evil of the trust movement. Roosevelt's policy was one of vigorous prosecution of those violating the antitrust laws and constant agitation for legislation which would give the government greater regulatory powers over business, particularly in the matter of enforced publicity as to corporate affairs.

Wilson, in *The New Freedom*, attacked Roosevelt's policy repeatedly. He feared that governmental efforts to regulate the trusts would lead to trust domination of the government. He did not believe that the trust movement was natural or evolutionary. He stated, "I admit that any large corporation built up by the legitimate processes of business, by economy, by efficiency, is natural; and I am not afraid of it, no matter how big it grows. It can stay big only by doing its work more efficiently than anybody else." However, he went on to say that size increased efficiency only up to a certain point and that the main purpose of the trust was to support

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negie (New York: Current Literature Publishing Co., 1908), 2 vols.; Woodrow Wilson, *The New Freedom* (New York: Doubleday, Page & Co., 1913).

<sup>97</sup> *Op. cit.*, II, 687. Note that no reference is made to the raising of prices.

<sup>98</sup> *Ibid.*, I, 324.

<sup>99</sup> *The Anti-Trust Act and the Supreme Court* (New York: Harper & Bros., 1914), pp. 127-128.

and sustain inefficiency. "It is based," he said, "upon nothing except power. It is not based on efficiency." And again, "I am for big business, and I am against the trusts."<sup>100</sup> Wilson's major condemnation of the trust movement was based mainly on his fears that the trust magnates exercised too great an influence on government officials, that the trust movement threatened to destroy the initiative and independence of the people, and that entry into many fields of business was barred by the trusts.

Between 1890 and 1914, several antitrust bills were debated in Congress. Following the enunciation of the "rule of reason" in 1911,<sup>101</sup> it became highly desirable to spell out specific prohibitions and to regulate methods of competition. These purposes were met by passage of the Clayton Antitrust and Federal Trade Commission Acts. There was vigorous debate on the Clayton Act, and strong opposition to it among the Republican minority, but throughout congressional debate on these two acts, there was virtually unanimous support of the principles of the Sherman Act.<sup>102</sup>

In conclusion, it seems obvious that economic considerations had only a minor influence on antitrust policy in its formative years. Had every economist in the country supported the trust movement as a natural industrial development and as a harbinger of increased efficiency, lower costs, greater productivity and prosperity, in all probability there would still have been condemnatory legislation. The major concerns expressed publicly were fear of the power of the trusts (political power leading to corruption and industrial power leading to a decline in initiative and individual opportunity)

<sup>100</sup> *Op. cit.*, pp. 166, 168, 180.

<sup>101</sup> The "rule of reason," first enunciated by Chief Justice White in *Standard Oil Co. v. U. S.*, 221 U. S. 1 (1911), at pp. 58-68, states simply that the court must use discretion in determining whether a given restraint falls under the Sherman Act. White was explicit in stating that restraints found to be within the purview of the statute could not be removed "by indulging in general reasoning as to the expediency or non-expediency of having made the contracts or the wisdom or want of wisdom of the statute which prohibited their being made" (p. 65).

In *U. S. v. American Tobacco Company*, 221 U. S. 106 (1911), at pp. 179-180, White elaborated on the rule of reason, commenting that acts prohibited by the statute could not be excused by a finding that they were reasonable, but that the court had to interpret the phrase "restraint of trade" in such a way as not to destroy the right of contract.

William Howard Taft, *op. cit.*, p. 114, notes widespread confusion on the rule of reason and observes that the only "reasonableness" the court can consider is whether the restraint is ancillary to a contract with a different and legitimate purpose.

<sup>102</sup> See J. D. Clark, *op. cit.*, pp. 165-187.



and a hostility to accumulations of great fortunes and to glaring inequities in income. Throughout, a strong emotional element was evident.<sup>103</sup>

### E. *The Relevance of Economic Theory to Early Trust Problems*

Although economic analysis played little part in the development of an antitrust policy, a review of the sort essayed above does indicate widespread ignorance and misinterpretation of the economic issues which were inevitably involved in the public debate. Three areas in which there were great confusion and error appear to stand out. First, there was doubt as to whether restriction of production made possible by unification of a large percentage of an industry was beneficial, in the sense of regulating production and ameliorating crises caused by unplanned overproduction, or whether it was harmful. Second, as evidenced repeatedly in testimony before the Industrial Commission, there was a concept of the "competitive price" and questions as to whether the trusts would be able to raise prices above the "competitive level." Third, there was a persistent belief that excess capitalization somehow brought about increased prices.

In regard to the first area, it must be recognized that the period of trust formation featured ever-increasing utilization of technological advance and promises of large economies of scale, and that there was little that a social scientist could say, as a scientist, on the ultimate effects of the movement. It is certainly understandable that economists were hostile or indifferent to the antitrust laws, being both alert to the dangers and conscious of the potential benefits of combination. To the extent that pure laissez-faire doctrines pervaded economic thinking, the trusts were accepted with equanimity or optimism. But concerning the technical relation between price and output, and the idea of overproduction, economic concepts which were widely known and accepted, and which were relevant to the public debate, were appearing in textbooks of the time. In the first edition of his *Principles of Economics*, published in 1890, Alfred Marshall, after defining and explaining price elastic-

<sup>103</sup> Taft, *op. cit.*, p. 34, gives a description of great popular "enthusiasm" and "lack of discretion" in antimonopoly sentiment.



ity of market demand relative to output,<sup>104</sup> discussed monopolistic pricing on the assumption that the monopolist sought to maximize his total net revenue. It did not take the apparatus of marginal cost and marginal revenue to lead Marshall to his conclusion:

The monopolist would lose all his Monopoly Revenue if he produced for sale an amount so great that its supply price, as here defined, was equal to its demand price: the amount which gives the maximum Monopoly Revenue is always considerably less than that.<sup>105</sup>

By 1910 the idea of elasticity of demand was appearing in introductory texts such as R. T. Ely's *Outlines of Economics*,<sup>106</sup> E. R. A. Seligman's *Principles of Economics*,<sup>107</sup> and H. R. Seager's *Introduction to Economics*.<sup>108</sup> Numerical illustrations comparing monopolistic and competitive prices and outputs, assuming similar costs, were given in all three texts. Assuming market demand to be the same in both cases, prices were shown to be higher and production lower in a monopolistic situation.

It should be noted that Marshall commented that while at first sight it would appear that the monopolistic price would always be higher than the competitive one, this was not necessarily the case as monopolization might lead to cost reductions. Thus, the economist was not in a position to condemn the trusts categorically on price and output grounds, but any man trained in economics could demonstrate the relationship between price and output and argue rigorously that, other things being equal, a control of supply would be used by a profits-oriented entrepreneur to restrict production and raise price.

In addition to demonstrating a rationale for output restriction on the part of a monopolist, elementary economic analysis could have been brought to bear on the contention that overproduction

<sup>104</sup> London: Macmillan & Co., I, 162-163.

<sup>105</sup> *Ibid.*, p. 463. The theory of monopolistic price is far older than 1890. See A. A. Cournot, *Researches into the Mathematical Principles of the Theory of Wealth*, 1838, trans. by N. T. Bacon (New York: Macmillan Co., 1897), pp. 56-66. See also Charles Ellet, *An Essay on the Laws of Trade, In Reference to the Works of Internal Improvement in the United States* (Richmond: P. D. Bernard, 1839). Ellet recognized the possibility of increasing monopolistic revenues through price discrimination.

<sup>106</sup> Revised and enlarged by the author, T. S. Adams, M. O. Lorenz, and A. A. Young (New York: Macmillan Co., 1908).

<sup>107</sup> Third ed.; New York: Longmans, Green, & Co., 1908.

<sup>108</sup> New York: Henry Holt & Co., 1904.

would be checked by combination. In 1889, in a short text, Ely stated:

The purpose of production is consumption, and if more is produced more must be consumed. Power to consume is measured by purchasing power, and power of consumption sets a limit to production. There is no such thing as general over-production, for more economic goods of all kinds have never been produced than men really need to satisfy their legitimate wants. On the contrary, not enough has ever yet been produced for this purpose. . . . A glut in the market always means under-consumption. This is one of the sad and curious features of the life of the modern socio-economic organism. Its parts do not always fulfill their functions harmoniously; frequently parts are partially incapacitated and the body is in a diseased condition.<sup>109</sup>

Seligman characterized the idea of general overproduction as "absurd." Overproduction, he felt, could exist in the sense that there were more goods on the market than could be sold profitably; but the trouble in this case lay in overcapitalization, with possible panic and bankruptcy when earnings did not meet expectations. "The important point," he stated in discussing crises, "is not production, but capitalization."<sup>110</sup>

If general overproduction was ruled out, economic theory had the answer for distortions in the structure of production which led to gluts in some areas. If supply exceeded demand at the current price, price would fall and some capital would move out of the industry, provided that the industry was competitive and that capital was free to flow.<sup>111</sup> The economist's answer, then, to glutted markets and crises was not combination but increased competition.

Difficulties in the second area, that of "competitive" and "monopoly" prices, could not have been eased by the application of the standard teachings of economics. Ely, Seager, and Seligman all distinguished sharply between a competitive market, which Seligman described as one of "Several Sellers and Several Buyers,"<sup>112</sup> and a monopolistic market, in which one seller controlled the supply of the commodity in question. In the competitive case, price was considered to be determined at the point of intersection of the de-

<sup>109</sup> *An Introduction to Political Economy* (New York: Chautauqua Press, 1889), p. 149.

<sup>110</sup> *Principles of Economics*, 3rd ed., pp. 584, 585-586.

<sup>111</sup> See Ely, *Outlines of Economics*, p. 174; Seager, *op. cit.*, pp. 160-161; and Seligman, *Principles of Economics*, 3rd ed., pp. 234-238.

<sup>112</sup> *Ibid.*, p. 233.

mand curve and the supply curve, a point which equated the price a marginal buyer was willing to pay with the costs of a marginal seller. The term "marginal cost" was used to describe the costs of production of this marginal producer. The monopolist, on the other hand, produced at a point where the positive difference between total revenue and total cost was the greatest. The textbook writers of the first decade of the twentieth century were aware that this dichotomy was an oversimplification, but they did no more than warn their readers of this fact.

In 1911, however, there appeared one study which in many respects anticipated the works of Joan Robinson and E. H. Chamberlin on partial equilibrium theory as well as J. M. Clark's work on overhead costs. This paper, by F. C. Hicks of the University of Cincinnati, is remarkable for its insights; but it appears to have made no lasting impression upon subsequent literature.<sup>113</sup>

Hicks reviewed the then current theory of price, using, for illustrative purposes, the 1909 edition of Ely's *Outlines of Economics*. The theory, he noted, recognized two sorts of price, competitive price and monopoly price. Under competition, price was equal to actual expense plus a "normal" profit. Hicks designated this total as "social cost of production."<sup>114</sup> A prime requisite for this condition that price equaled social cost of production was that labor, capital, and business ability be free to flow from one industry to another. The assumption that all of these factors were perfectly mobile was not necessary; all that was required was that enough were free to flow into profitable areas and out of unprofitable ones

<sup>113</sup> "Competitive and Monopoly Price," *University of Cincinnati Studies*, Vol. VII, no. 2 (March-April, 1911).

See also an earlier work, *Lectures on the Theory of Economics* (Cincinnati: University of Cincinnati Press, 1901), pp. 57-69, in which Hicks also dealt with competition and what he referred to as "monopolization." The latter was defined as "power of control in the contest between rival interests" (p. 60). Hicks argued that complete monopolization could not exist, and that partial monopolization served a useful social function as a check on competition which otherwise might not end until all but one of the competitors had been eliminated or all were exhausted and depleted. He concluded, "Moreover, the popular view considers the element of monopolization to be present only when power of control is so extensive that the welfare of society is believed to be endangered by it; while the present analysis insists on recognizing the phenomenon of power of control and on calling it by the same name, regardless of its amount" (p. 68). The genesis of Hicks's later study can be seen in this book, but the treatment was neither as exhaustive nor as rigorous as in the 1911 work.

<sup>114</sup> "Competitive and Monopoly Price," *op. cit.*, p. 12.



until no incentive for further flow existed. Monopoly price, in distinction, depended on maximum possible profits rather than normal profits. If the monopolist raised his price above the determined point, the quantity demanded would fall off so much relative to cost that total profits declined; and if he lowered his price, the quantity demanded would not rise enough to offset the lessened return per unit. Hicks then proceeded to raise some extremely pertinent objections to this theory.

First, he asked, "Why does competitive price not rise above social cost?" and, "Why does monopoly price not rise higher than it does?"<sup>115</sup> The answer to the first query was that if price rose above social cost other firms would come into the industry and competition would reduce price. The answer to the second question was that any further increase by the monopolist would cause a fall in profits because of decreased sales. But this raised the further question as to what happened to the money not spent on the monopolist's goods when he thus raised his price. The answer, for Hicks, was obvious: it was spent on other goods. He concluded, "Rivalry between those who sell like commodities is probably, as a rule, more intense than that between sellers of unlike commodities, but this is a difference in degree, not in kind." In both the "monopoly" and the "competitive" cases, price was determined "by the point which *under the existing condition of competition* will yield the largest net returns."<sup>116</sup>

Next, Hicks addressed himself to the question of what factors kept both competitive and monopoly prices from falling below the determined points. In the monopoly case, the standard answer was that a "substantial unity of action" gave control over supply and permitted the monopolist to adjust supply to conditions of demand in such a way as to maximize profits. In the competitive case, it was argued that with a fall in price below social cost, some producers would either leave voluntarily for other fields or would fail. But Hicks did not see why this reduction in supply, by itself, would bring prices up. Rather, he said, prices would continue to fall as long as even two producers continued to compete. What, in fact, brought prices back up was a unity of action which might come ultimately when all producers but one were ruined, or from agree-

<sup>115</sup> *Ibid.*, pp. 21, 22.

<sup>116</sup> *Ibid.*, p. 24. Italics as in original.



ment among producers. More probably, the unity of action would result from "independent recognition by each that he is a loser from unreasonable competition and will be a gainer by spontaneously acting in union with the others." Hicks concluded, "*Moreover, the unity of action which is effective in the case of competitive price is a phenomenon in no whit different in kind from the unity of action which is effective in the case of monopoly price. Such difference as exists is wholly one of degree.*"<sup>117</sup>

Competition alone, particularly in an era of big business and an absence of fluidity of capital, Hicks felt, was ruinous. Public policy should seek a balance between competition and unity of action.<sup>118</sup>

Hicks was not the only writer to concern himself with problems of price and production equilibria other than those of the cases now described as pure monopoly and pure competition. C. J. Foreman, in reviewing both the economic and legal definitions of monopoly, noted that the concept of "differential monopoly" was used and expounded by S. N. Patten and E. R. Johnson in this country and Charles Gide in France. "These men," Foreman stated, "make the concept of a differential monopoly include any surplus above costs which may be acquired in either production or consumption." Foreman regarded ideas of differential monopoly as following logically from the treatment of monopoly in the writings of Adam Smith, Malthus, Ricardo, Senior, and J. S. Mill.

However, Foreman continued, most of the prominent economists of the United States held to a theory of "complete monopoly." He mentioned R. T. Ely, C. J. Bullock, H. R. Seager, F. W. Taussig, and F. M. Taylor as among the "many economists who restrict the monopoly control to one person or a single group of persons." Foreman commented:

In denying the theory of a differential monopoly, each writer here has in turn founded monopoly upon exclusive command over supply, which is obviously identical with the legal principle of absolute control; and these excerpts stand as authoritative statements of the scarcity theory

<sup>117</sup> *Ibid.*, pp. 25, 27, 29. Italics as in original.

<sup>118</sup> For a critical review of Hicks's study, see E. E. Agger, "Monopoly and Competitive Prices," *American Economic Review*, III, no. 3 (Sept., 1913), 589-597. Agger noted that competition among buyers, which Hicks ignored, may serve to keep prices from falling below the "competitive price" and that if such is the case, it is not necessary to assume unity of action.

of monopoly control, a view still to be revised and supplemented before it will accord with the logic of concrete circumstances.<sup>119</sup>

Foreman observed the fact that these economists admitted the possibility of partial control existing over price or supply. He criticized them, however, for stating this concept of partial control vaguely and for failing to recognize how seriously it weakened the theory of complete monopoly which they employed. By 1919, Foreman believed, the concept of differential monopoly was becoming more widely accepted, despite the dichotomy between competition and monopoly then used by the country's most prominent economists.

The third area of confusion cited above, arising from the idea that excessive capitalization caused increased prices, could have been treated easily by existing economic theory. Overcapitalization, as then understood, could come about either by excessive indebtedness or by excessive stock issuance, or by any combination of these which led to liabilities and proprietary claims in excess of a reasonable valuation of the firm's assets. The liabilities might lead to heavy interest expenses; but, once the debt was incurred, such expenses would arise regardless of the firm's price and production policies. Economists did not need the marginal cost apparatus to observe, as did Ely in his *Outlines of Economics*, "Fixed expenses have no influence in determining the price."<sup>120</sup> Further, if it was assumed that the entrepreneur sought to maximize his profits (an assumption not denied in the popular discussion), it should have been clear that it made no difference to price how these profits were divided, or among how many shares of stock.

The treatments of capitalization in Ely, Seligman, and Seager are all explicit in tracing the causal relationship between price and overcapitalization. The earnings of a proposed combination might be estimated, making certain assumptions as to the price to be charged, the quantity to be produced, and cost reductions to be effected. These estimated earnings were often capitalized in order to determine the capital structure of the combination. Thus, expected price could effect capitalization, not vice versa. The evils of overcapitalization arose from the fact that estimates of earnings

<sup>119</sup> "Theories and Tests of Monopoly Control," *American Economic Review*, IX, no. 3 (Sept., 1919), 482-501.

<sup>120</sup> *Op. cit.*, p. 200.

were often overoptimistic; and as a result, investors might be misled into believing that securities outstanding represented reasonable estimates of the firm's asset values, or the firm might find itself saddled with excessive fixed charges leading to eventual bankruptcy. These textbooks never intimated that excessive capitalization could cause higher prices than would have been charged were the capitalization equal to the actual value of the assets.<sup>121</sup>

Thus, although economists could not be expected to give definitive answers to the trust questions, there was a great deal that anyone trained in economics, not only a sophisticated theoretician, could have contributed which would have added logic and some precision to the debate on trusts. It also seems highly probable that, if a larger number of economists had focused their attention on the trust movement, analyses would have developed far more rapidly than was the case. This is evidenced by Hicks's article cited above, and its neglect by subsequent writers.

Yet, during the years in which a national antitrust policy was beginning to take shape, economists showed little concern with the trusts. This has been commented on by Thorelli, Letwin, and J. D. Clark.

The classicists, such as Francis Wayland, Amasa Walker, A. L. Perry, J. M. Sturtevant, and Lyman Walker, as described by Thorelli, felt that the trust problem was either unimportant or self-correcting. They considered potential competition to be an adequate safeguard or they recommended enforced publicity as a remedy for the evils that they did see. Thorelli suggests that some classicists simply ignored the problem because it could not be contained within their theories. However, the revolt against *laissez faire* did not serve to stimulate interest in antitrust policy, because the rebels generally adopted the "historicism" of German economics. This historical school accepted state intervention in and regulation of the economic processes, rather than an enforcement of competitive conditions, as the substitute for *laissez faire*. In addition, Thorelli observes, there was some emphasis on developing the ethics of Christianity within

<sup>121</sup> See Ely, *Outlines of Economics*, pp. 144-146; Seager, *op. cit.*, pp. 199-202, Seligman, *Principles of Economics*, 3rd ed., pp. 273-274. Note *supra*, p. 41, for Seligman's observation that overcapitalization may harm the consumer by contributing to crises. None of these writers suggested that overcapitalization might arise from bargaining among the owners of the firms to be combined as to their relative shares in the securities of the new firm and might thus exceed even estimated earnings.



industrial activity which merged with historicism and gave a further impetus to rejection of the antitrust philosophy.<sup>122</sup>

Although Thorelli's analysis may help to explain why the younger economists did not contribute vigorously to the antitrust debate, the explanation cannot be made solely in terms of schools and dogmatism. More basically, economists were faced with a new phenomenon, and they needed an adequate concept of the trust, an understanding of its nature and of its potentialities, before they could propose appropriate public policy towards it. The issue of naturalness thwarted efforts to achieve this concept, and determination to add relevance to theory did not reach impressive proportions until after the First World War.

J. D. Clark put much emphasis on the lack of economic considerations and the failure to utilize economic advice in the formation of the nation's antitrust policy. However, he apparently felt that the major part of the blame lay with the legislators for failing to seek professional guidance:

This neglect of economic opinion is somewhat surprising in view of the conditions then prevailing. Disregard of the views of the scientific students of the problem in 1890 and the adoption by Congress of the customary legislative policy of trying to cure any unwanted condition by prohibiting the thing which creates that condition are not difficult to understand. But there is no simple explanation of the failure of Congress to give some attention to economists in 1900, when the experience of ten years had been so bitterly disappointing, when the effort to enforce the law against the trust with the highest percentage of control of its market and with the most certain history of price manipulation had failed, and when a new era of mergers surpassing in numbers and importance anything which had gone before had proceeded without the slightest interference by federal authorities.<sup>123</sup>

Clark further indicated an awareness of one difficulty which this study stresses, namely that only after the First World War were economists able to observe and attempt to assess the actual performance of the trusts in comparison with their claims of increased efficiency and cost savings.

In summary, economics could contribute little in the way of policy recommendations until there was a reasonably clear under-

<sup>122</sup> See comment on J. B. Clark, *The Philosophy of Wealth*, *supra*, p. 22. Thorelli cites the Rev. E. B. Andrews as going much further than Clark, rejecting the idea of potential competition and urging direct government regulation to see that all benefits of consolidation went to the consumer. *Op. cit.*, pp. 122-126.

<sup>123</sup> *Op. cit.*, pp. 100-101.

standing of the nature of the large firm and of its place in an industrial society. The basic problem was not that theory was inadequate, but that it could not be applied for policy purposes until a meaningful empirical framework was supplied.

Economists were well aware of this difficulty. Problems of business concentration and antitrust policy were stressed at the twenty-sixth annual meeting of the American Economic Association in 1913, and complaints as to the lack of understanding of methods of the combinations and information on their results are a recurring theme in the discussion.<sup>124</sup> Most of the observations related to the claimed efficiencies of the trusts, both through operating economies of scale and through the elimination of costly wastes of competitive effort. Thus, in the presidential address, David Kinley stated:

It has been claimed for the trusts that they were more efficient as producers and distributors than similar enterprises in the same line. I do not feel that this claim has been established, and think that there are signs that it is largely untrue. The economies of big business have been secured at an economic and social cost that has not been fully evident or fully understood.<sup>125</sup>

W. E. Hotchkiss, reviewing the effect of trust decisions on business activity, stated that new assumptions as to efficiency had shifted the burden of proof onto the trusts to demonstrate their advantages. By 1913, Hotchkiss felt, it was obvious that the impelling motives behind trust formation had been market control and the profits of organization, not efficiency in production or distribution. He called for a large-scale investigation of trust efficiency by the Bureau of Corporations.<sup>126</sup>

In discussion of Hotchkiss' paper, William Rawles generalized the difficulty. He noted that competent and disinterested economists argued that combinations were inevitable in that they conformed to natural laws of economic evolution while others, equally competent, claimed that the trusts would disintegrate if their artificial advantages were removed and they were exposed to competition. Rawles concluded, "After making allowances for temperamental characteristics, I can find only one satisfactory explana-

<sup>124</sup> Papers and Proceedings of the Twenty-sixth Annual Meeting of the American Economic Association, *American Economic Review*, IV, no. 1 (March, 1914).

<sup>125</sup> "The Renewed Extension of Government Control of Economic Life," *ibid.*, p. 13.

<sup>126</sup> "Recent Trust Decisions and Business," *ibid.*, pp. 158-172.

tion for such a difference in views. That is a lack of sufficient data from which to draw accurate conclusions." Rawles, however, cited the efficiency of trusts as "the essential point in the controversy."<sup>127</sup>

In the introduction to a recent work, Senator Paul Douglas states:

During the last decade men and women have without much thought increasingly accepted the idea that large business enterprises are both economically and socially desirable. Yet Joan Robinson, nearly a quarter of a century ago, in her *Economics of Imperfect Competition*, demonstrated that the larger the share of a product turned out by a company, the smaller the output and the higher the price in comparison with what it would have been under perfect competition. At approximately the same time, E. H. Chamberlain [*sic*] called attention to the fact that concerns were trying and in part succeeding in removing their products from competition by means of differentiating their products and using advertising to build up both rational and irrational belief.

Economists and the public should have been convinced by these works as well as by general observation that government should seek to restore as large a degree of competition as was possible. . . .

It is a tragedy that this popular enlightenment did not occur.<sup>128</sup>

Contrary to this statement, as we have seen above, commonly accepted economic theory could have been used advantageously to clarify misconceptions in the trust debate long before Mrs. Robinson and Professor Chamberlin added to the theory logically acceptable analyses of the area between monopoly and perfect competition. Robinson and Chamberlin made their most important contributions in turning analysis into channels having relevance to existing economic structures. The great value of their works lies in the adaptation of theory to conditions and in modifying or supplementing theory to meet new needs. Neither Chamberlin nor Robinson could, nor tried to, prove rigorously by existing or new theory any universally true and immutable proposition to the effect that competition should be restored to the greatest possible degree under any circumstances, as Douglas suggests. In the present state of economic theory, it would be tragic for economists and the public to accept these works as dogma of some sort and to close their minds to further efforts to add to our concepts of the large firm.

<sup>127</sup> "Recent Trust Decisions and Business—Discussion," *ibid.*, pp. 178, 182.

<sup>128</sup> Walter Adams and Horace Gray, *Monopoly in America: The Government as Promoter* (New York: Macmillan Co., 1955), Preface, p. xiii.



## *Chapter Two: ECONOMIC ANALYSIS OF BIG BUSINESS FROM THE FIRST WORLD WAR TO THE DEPRESSION: INCREASING REALISM IN ASSUMPTIONS AND ANALY- SIS AND THE CHALLENGE TO A COM- PETITIVE STANDARD*

### *A. Studies of the Actual Performance and Claimed Efficiencies of Combination*

The period from the passage of the 1914 antitrust legislation through the First World War and the boom era of the 1920's, until the onset of the depression of the 1930's, is often described as the heyday of the businessman. Crusading zeal and reforming spirit, exemplified in such diverse men as Theodore Roosevelt and Lincoln Steffens, failed to capture the fancy of the public, and gave way, first to the enthusiasm of war and then to the "normalcy" of President Warren G. Harding.<sup>1</sup> During the 1920's another aspect of business practice came into prominence and challenged those concerned with the enforcement of the antitrust laws. The growth of the trade association movement raised problems as to the legitimate activities of organizations whose members were competing firms. Both the Federal Trade Commission and the Department of Justice were occupied with a number of court cases in an effort to establish a reasonable standard of behavior for the trade association.<sup>2</sup> Further, decisions of the Supreme Court in the *U. S. Steel* and *International Harvester*<sup>3</sup> cases, reflecting the courts'

<sup>1</sup> For an excellent popularized account of this shift in public sentiment and of the stature of the businessman in the 1920's, see F. L. Allen, *The Lords of Creation* (New York: Harper & Bros., 1935), chaps. v-viii.

<sup>2</sup> *American Column & Lumber Co. v. U. S.*, 257 U. S. 377 (1921); *U. S. v. American Linseed Oil Co.*, 262 U. S. 371 (1923); *Maple Flooring Manufacturers Assn. v. U. S.* 268 U. S. 563 (1925); *Cement Manufacturers Assn. v. U. S.*, 268 U. S. 588 (1925).

<sup>3</sup> *U. S. v. United States Steel Corporation*, 251 U. S. 417 (1920); *U. S. v. International Harvester Co.*, 274 U. S. 693 (1927).

opinion that size in and of itself was no offense to the law, led to a reluctance to expend the enforcement agencies' limited funds on vigorous prosecution of large firms. This reluctance extended to control of mergers as the courts debilitated Section 7 of the Clayton Act by declaring that the Federal Trade Commission could not act to bar the acquisition of assets through use of the voting power of illegally acquired stock.<sup>4</sup>

Arthur Jerome Eddy, a lawyer from Chicago, achieved national prominence just before the First World War as the man whose slogan-filled book, *The New Competition*,<sup>5</sup> gave ethical and moral support to the growing trade association movement. Competition, for Eddy, was perfectly natural—as natural as the laws of the jungle and just as sordid. However, he saw human progress as embodied in man's evolutionary effort to rise above and free himself from the laws of nature. One escape was through integration, the coming together of two or more competitors, and this could have two results. "Partnerships, corporations, trusts," he wrote, "are all in the direction of more for less money: labor unions and farmers' organizations are all in the direction of less for more money."<sup>6</sup> Eddy urged, as a solution for blind competition, in which sales were frequently below cost and every hand was raised against neighbors, a new co-operative competition based on the open price system. Under this system all prices, bids, contracts, and cost computations would be made public through a trade association, both to competitors and to the public. This was only the first step towards a future regime of industrial harmony which Eddy envisaged. Under this system the antitrust laws would have to go. They served no purpose, said Eddy, but to bolster up the old, savage order. The trusts had, surely, abused their power and exploited their customers and suppliers, but no more than the small businessman

<sup>4</sup> Section 7 as drafted in Congress forbade acquisition of "stock or other share capital" where the effect would be substantially to lessen competition, restrain commerce, or tend to create a monopoly. Congress's failure to bar acquisition of assets under these tests was expanded to a more complete nullification of the section by a court ruling that the Federal Trade Commission could not institute proceedings if a transfer of assets had been completed, even though the transfer had been effected by the voting power of stock whose acquisition had violated the law.

*F.T.C. v. Western Meat Co., Thatcher Mfg. Co. v. F.T.C., Swift & Co. v. F.T.C.*, 272 U. S. 554 (1926).

<sup>5</sup> Chicago: A. C. McClurg & Co., 1913.

<sup>6</sup> *Ibid.*, p. 51.

who has had to lie, cheat, and adulterate in order to survive. If all, big and little, came under the open price system, these abuses would vanish, and the Sherman Act would disappear "as one of man's many futile attempts to check evolution."<sup>7</sup>

Eddy's optimism and naïve faith were apparently based on the assumption that accepted canons of business ethics would be enforced by popular pressure throughout the business community once widespread publicity was introduced by the trade associations. The most glaring fault in Eddy's work, assuming that his reliance on publicity was justified, is his failure to demonstrate that the widespread acceptance of business ethics would promote public welfare. The emphasis put on unfair methods of competition and on pricing below cost would indicate far more concern with the businessman than with the consumer. Competition for consumer dollars would presumably mean more than merely warfare to a man who was genuinely concerned with general well-being, even if he were a lawyer and not a trained economist.

However, during this period in which government and the public seemed relatively unconcerned, study of the problems of monopoly and business concentration attracted the continued attention of able economists. The most notable aspect of those economic writings dealing with the trust problem was the effort to bring relevance to the analysis of the role of the large firm in the industrial setting of the modern United States. Very early in the decade, the efficiencies claimed for the combinations came under scrutiny. An analysis of the actual performance of the trusts was important, as we have seen how the question of efficiency troubled men of such stature as Taussig and Fisher; further, a showing that the trusts had failed to increase efficiency would have greatly reduced the force of remaining arguments for the naturalness of the trust movement. An evaluation of the trusts' claimed efficiencies probably could not have been made before this period, but by the 1920's the combinations formed during the merger movement of the 1900's or earlier had established records which could be assessed.

In 1921 Eliot Jones, in his book *The Trust Problem in the United States*,<sup>8</sup> devoted considerable space to the economies of the trusts. Separate chapters were concerned with each of the follow-

<sup>7</sup> *Ibid.*, p. 339.

<sup>8</sup> New York: Macmillan Co., 1921.



ing trusts: Standard Oil Company, American Sugar Refining Company, American Tobacco Company, United Shoe Machinery Company, United States Steel Corporation, and International Harvester Company. In each case, after reviewing the organization and history of the trust, Jones made reference to the economies which conceivably could have been achieved. Thus, in his chapter on Standard Oil, Jones asked, "Did the establishment of a trust make it possible for the Standard to produce more cheaply than its competitors, combined though some of them were, and was the Standard able to retain its monopoly by the practice of maintaining such a low level of prices the country over that competition was impossible?"<sup>9</sup> Jones then reviewed a 1907 report of the Bureau of Corporations and concluded that Standard's refining costs were slightly lower than those of the independents primarily because of better utilization of by-products made available by larger refineries and because of superior location and resulting savings in transportation expense. These lower costs, it was found, were not reflected in lower prices and therefore could not explain the monopolistic position that Standard achieved. The explanation lay in ownership of pipelines, railroad rate discriminations, and unfair methods of competition in the sale of refined products. In all other cases, Jones's approach and conclusions were similar. The trusts had not risen to positions of dominance through consistently selling at prices which competitors could not meet. The American Sugar Refining Company, for example, owed its success to tariff protection, downright dishonesty, and a sustained policy of buying out successful competitors. Similarly, the growth of American Tobacco was held to be due primarily to the trust's absorption of independents; yet there were, admittedly, significant economies of scale in cigarette manufacture. Jones noted that the market shares of both U. S. Steel and International Harvester had declined since the trusts had been formed, although the latter company had become the most efficient producer of agricultural machinery. United Shoe Machinery Company, which owed its dominant position to the initial merger which had formed it, was sustained by patent protection and the tying clause in its leases. Thus, even where economies had been achieved by combination, the consumer had not received the benefit.

<sup>9</sup> *Ibid.*, p. 62.

Jones devoted a chapter to "The Anticipated Economies of the Trust Form of Organization—To What Extent Realized."<sup>10</sup> He noted that the problem was not that of ascertaining economies of scale or of combination, but rather of determining whether there were significant economies that could be achieved by a trust having monopolistic powers which were not available to large firms that did not possess such power. Jones systematically listed and examined several possible economies under each of three headings: bargaining, production, and selling. He observed that a listing of possible economies might be misleading, as some precluded others, and any one trust might avail itself of only a few such economies. For example, specialization of plant, one suggested economy, precluded intra-company competition among plants, another economy which, it was claimed, would result in the most efficient methods devised in each plant being used throughout the trust. Finally, Jones considered disadvantages of the trust, including difficulties of management and control, outlays for the central organization, and the costs of inefficient plants acquired in order to achieve monopoly. He concluded that, although the question of the economies of the trusts remained perplexing, and in need of further facts, the trusts' performances had been disappointing.

In the same year, 1921, A. S. Dewing took a different approach to the question. Dewing attempted to measure the success of consolidation, defining a success as "a business that yields a relatively large profit to the managers."<sup>11</sup> Dewing argued that, in a competitive economy, success in terms of profits implied success through sales at prices which were low relative to competitive costs of production and through development over a significant period of time. Dewing studied thirty-five combinations, chosen at random, which met the following conditions: (1) the combination must have been in existence for ten years prior to 1914, (2) it must have combined at least five formerly independent and competing plants, (3) it must have been of national significance, (4) it must have published financial statements in which some confidence could be placed, and (5) the statements of earnings of the component firms prior to the combination must have been available.

<sup>10</sup> *Ibid.*, pp. 499-541.

<sup>11</sup> "A Statistical Test of the Success of Consolidations," *Quarterly Journal of Economics*, XXXVI (Nov., 1921), 84-101.

Dewing described three criteria for success of a combination. First, profits of the combination should be larger than the sum of the profits of individual firms comprising the combination. The condition that the combination be in existence for ten years prior to 1914 meant that it would have been through years of both prosperity and depression and therefore, Dewing felt, its profits would be comparable with those of its components. Second, profits of the combination should be approximately equal to those estimated by its promoters. Third, earnings over a reasonable period of time, say ten years, should increase. Dewing's findings may be quoted:

. . . the aggregate earnings of the separate competing establishments prior to consolidation were seven-tenths of the earnings estimated to follow consolidation. . . . But in actual results the earnings before the consolidation were nearly a fifth *greater* (18%) than the earnings of the first year after consolidation. . . . Nor were the sustained earnings an improvement, for the earnings before the consolidation were between a fifth and a sixth greater than the average for the ten years following the consolidation. . . .

The estimated earnings were half again as large as the actual earnings of the first year after the union, and nearly twice as great (175%) as the average earnings during the ten-year period following consolidation. . . .

The representative earnings of consolidation during the first year were less, by about a tenth, than the average earnings during the ten-year period. . . . The earnings of the first year after consolidation were greater—by a little less than a tenth (7%)—than the earnings of the tenth year.<sup>12</sup>

It should be noted that fourteen years later, Shaw Livermore, using a far larger sample, concluded that a slight majority of mergers had led to successful organizations. Livermore objected to confining the study to organizations possessing monopoly power, as Jones had done, and to the criteria of success used by Dewing. He felt that even those combinations which had originally possessed monopolistic power had lost it within a decade and that the over-all success of the merger movement must be attributed to the economies of scale and to high order management.<sup>13</sup>

There are weaknesses in both Jones's and Dewing's studies.

<sup>12</sup> *Ibid.*, pp. 90-94. Italics as in original.

<sup>13</sup> "The Success of Industrial Mergers," *Quarterly Journal of Economics*, L, no. 1 (Nov., 1935), 68-96.



Jones did note that prices had fallen in some cases: notably, both the prices of petroleum products and the costs of refining fell during the lifetime of the Standard Oil trust. Jones, however, attributed this fall in price to technological improvements which he thought would have been introduced into the industry whether or not the trust had been formed. He was forced, as a result, to compare actual performance with that which might, hypothetically, have been achieved within a competitive industry. He discussed research, but suggested that trustification of an industry might dull its inventiveness; and, to the extent that the trust stood as the sole buyer, it might destroy incentives for outside inventors. He did not consider the possibility, emphasized by later writers, that the trusts might engage in research activities which would not be undertaken by smaller firms or firms with less market power. Although Jones did not present a thoroughly convincing case against the economies of the trusts and indicated this frankly in calling for further investigation, he did demonstrate clearly that the trusts had used whatever degrees of monopolistic power they possessed to prevent such economies from being passed on to the consumer.

The major weakness of Dewing's study lies in his equating financial success with socially desirable performance such as the reduction of prices. Under the premises of existing economic theory, such an equation would be valid only to the extent that the combinations were subject to market competition. Thus, implicitly, Dewing was suggesting that the combinations did not achieve a significant degree of monopolistic power, and therefore a legitimate test of their success could be made by a simple random selection of combinations meeting certain requirements as to availability of information. Nevertheless, in conjunction with Jones's work on trusts which were presumed to have possessed monopolistic power, Dewing presented a valuable case against the argument that the combination movement was natural, evolutionary, and a vehicle of economic progress.

#### *B. Application of Economic Theory to the Emerging Facts of Monopolistic Behavior: J. M. Clark and F. A. Fetter*

John M. Clark and Frank A. Fetter epitomize the line of work which appears to be most significant in the 1920's, namely an effort

to expand economic theory in order that it might adequately cover conditions emerging in concentrated and large-scale industry. In the main, there was no rejection of economic theory, but an effort to supplement it.

Dorfman quotes a letter from J. M. Clark, the son of J. B. Clark, describing the development of his father's attitudes as follows:

In a historical movement like the development of consolidations, concentration, and monopoly, there may be a first stage when it is new and people are alarmed by the prospective threat it presents. That stage might be represented by the concern shown in *The Philosophy of Wealth* about such things.

There may come a stage where people find the world going on much the same as before in spite of the presence of the new factor, and their emphasis is toned down to a secondary qualification on a system primarily built around the older factors; as my father's later system is built around free competition with the assumption that the force of monopoly can be successfully "contained."

Later still may come a stage at which the new factors have really developed their power, perhaps to the point of dethroning the older forces from their dominant position. The students may be forced to shift their emphasis, as I think we are forced today, and our appraisals may sound more like those of the people of the first period who were excited about what the new movement might do. Much the same might be true of the need for considering ethical factors.<sup>14</sup>

J. B. Clark, in the 1901 edition of *The Control of Trusts*, had accepted regulated competition, shorn of specific abuses, as the best guide to the economic order. In 1912, a new edition of this book, written with his son J. M. Clark, was brought out. In the preface, J. M. Clark is credited with the majority of new material, but it is explicitly stated that both authors shared in revisions of the 1901 edition. The later edition showed far more tolerance for the antitrust laws than had the older one. The most caustic comments towards these laws were deleted. In the preceding year, 1911, dissolution decrees against the American Tobacco Company and the Standard Oil Company had been upheld by the U. S. Supreme Court and ordered enforced, and this was evidently in the Clarks' minds when they wrote, "We know to-day that we *can* dissolve the trusts—that we can break up the big corporations into smaller ones—and this is distinctly more than we once knew."<sup>15</sup>

<sup>14</sup> *Op. cit.*, pp. 204-205.

<sup>15</sup> *The Control of Trusts*, rewritten and enlarged (New York: Macmillan Co., 1912), p. 3. Italics as in original.

But they still questioned the wisdom of a vigorous dissolution policy. The trusts, they pointed out, had performed a distinct economic service in eliminating cut-throat competition, and public policy should have a better objective than return to the earlier chaos. The problem was, they thought, to see that the trusts continued to be agents of progress; for, if they stagnated, this would be a far worse failing than tending to raise prices and reduce output. The trusts that proved to be true monopolies—that could stand still because they feared no competition, existent or potential—should be dissolved. The Sherman Act should be reinforced with legislation specifically prohibiting discriminations of the types condemned in the earlier version,<sup>16</sup> and impartial access to transportation facilities, including water transportation, should be assured. Then real or latent competition could be relied upon.

During the 1920's J. M. Clark subjected traditional economic theory to a searching test in his studies of overhead costs.<sup>17</sup> Clark defined overhead costs simply as those which did not vary with output or could not be traced to units of output and argued that these costs were of central importance in modern processes of production. Economic theory, he felt, should be built around the issues raised by overhead costs, whereas it customarily treated them as a relatively trivial side issue. Although in his *Studies in the Economics of Overhead Costs* Clark stressed the point that the problems raised by overhead cost were universal in an industrial economy and not confined to the monopolistic areas, it is evident that his work in this field had a strong effect on his attitudes towards antitrust policy. Very briefly, if these costs were an important element in virtually all production, then price discrimination was inevitable, for beyond a certain point any contribution at all made to overhead was worthwhile, especially when excess capacity existed. The omnipresent nature of overhead costs heightened a problem first stated by A. T. Hadley,<sup>18</sup> namely, that there was a large range between the profits required to attract new firms to an industry and the

<sup>16</sup> Cf. *supra*, p. 22.

<sup>17</sup> "Overhead Costs in Industry," *Journal of Political Economy*, XXXI, nos. 1, 2, and 5 (Feb., April, and Oct., 1923), 47-64, 209-242, 606-636; *Studies in the Economics of Overhead Costs* (Chicago: University of Chicago Press, 1923).

<sup>18</sup> *Railroad Transportation; Its History and Its Laws* (New York: G. P. Putnam's Sons, 1885), pp. 70-74. For Clark's acknowledgement to Hadley, see *Studies in the Economics of Overhead Costs*, p. 12.



losses necessary to cause existing firms to withdraw from the industry. Clark sought to demonstrate by arithmetic example that the total product will be exhausted if each factor receives in reimbursement the equivalent of its marginal product. However, items of overhead have a marginal product of zero in the short run, as by definition they do not vary with output. Thus, there is a continuing element conducive to loss inherent in modern business, as fixed capital may fail to earn any return in a competitive order where decisions are often made on a short run basis.<sup>19</sup> Under such conditions competition as envisaged by classical economic theory could not be expected to survive. This condition was alleviated, in Clark's mind, by a spontaneous adjustment within the business group:

Since unchecked competition is suicidal and cannot continue, can anything continue which deserves the name of competition, or are we living in a regime of combination and monopoly, and is monopoly essential to the life of private industry? This is a real and serious question. The answer appears to be that business rivalry still exists, subject to checks in the way of understandings and standards of fair tactics, enforced partly by the group ethics of the business community, partly by a lively sense of the need of common self-preservation, which is at the bottom of a deal of the business ethics, and partly by the discipline exercised by the larger and stronger concerns, who can make it decidedly uncomfortable for smaller businesses which abuse their privileges and overstep the limits of tolerated trading.<sup>20</sup>

Also important to J. M. Clark were developments in cost accounting, which could give businessmen a clearer picture of just what they were doing in attempting to set prices which covered costs, and the growing moral condemnation of spoiling the market.

J. M. Clark's work on overhead costs is important as a landmark in examination of the relevance of the assumptions, not the logic, of economic theory, through a thorough examination of some of the institutional features of an industrial economy. If it were

<sup>19</sup> This can be rigorously proved, by Euler's theorem, only if there are constant returns to scale (a linear homogeneous production function), and is of significance only in the short run. "Yet nearly every market situation," Clark observes, "is a short run situation" (*Studies in the Economics of Overhead Costs*, p. 470).

See F. H. Knight and J. M. Clark, "A Note on Professor Clark's Illustration of Marginal Productivity," *Journal of Political Economy*, XXXIII, no. 5 (Oct., 1925), 550-562, for a critical analysis and defense of Clark's arithmetic illustration.

<sup>20</sup> *Studies in the Economics of Overhead Costs*, p. 435.

considered necessary to classify this work, it could properly be placed as another step in the growing number of attacks on *laissez faire*. Clark was highly concerned over the divergence between items of "social overhead," such as old-age subsistence for retired workmen, and the items of overhead cost that managers of individual firms would have to assume. Also, he argued that there were forces at work in a *laissez-faire* economy, such as increasing population and automatic machinery, and the displacement of small proprietors and self-employed, which tended always towards creating a supply of productive forces greater than the demand for them.

In 1926 J. M. Clark published his *Social Control of Business*, a textbook study dealing not only with the economics of concentration, but with the ethical, legal, and political factors involved in the public regulation of industry.<sup>21</sup> By this time he had accepted the antitrust laws and expressed optimism over legal developments in their enforcement.

The law, Clark noted, "is a means to a social end." Although tied to precedent, the law is capable of almost any change demanded by the needs of society, indeed possessing the power to override legislation. In the field of social control of business, Clark envisaged the law as becoming evermore a conscious instrument of public purpose. "And while the inertia of precedent persists and the value of stability is highly emphasized," he wrote, "nonetheless economic facts are more and more finding their way into legal briefs, and the evolution of law in response to changing economic circumstances is coming to be recognized as one of the accepted conditions of present-day life."<sup>22</sup>

In specific comments on the antitrust laws, Clark noted that these laws had prevented business combinations from achieving clear domination of markets and complete control of industries while, at the same time, forcing competitors to abandon loose agreements in favor of outright merger. Thus, a sort of rough limit had been set to the growth of combinations. This result, Clark observed, stemmed from the fact that the courts were more concerned with the intentions behind business actions and their effects on competition and the public than with the various formal types of combination.

<sup>21</sup> Chicago: University of Chicago Press, 1926.

<sup>22</sup> *Ibid.*, p. 145.

Clark's position at this time seems to have been that the courts were condemning only combinations evidencing clear-cut anti-social behavior, while simply ignoring the dangerously broad prohibitions written into the antitrust laws. On this basis, Clark welcomed these laws.

Frank Albert Fetter was another keen scholar, thoroughly grounded in economic theory, who examined the assumptions of theory and their relevance to existing institutions with great care and skill. In 1924 he noted:

The exponent of practical business invoked abstract principles very dogmatically whenever he thought they favored his case; the academic economist became more realistic, recognizing the conflict of facts with the old assumptions. . . . The economists have not lost faith in the virtues of free competition in industry where it actually exists or is possible, as among the members of fairly equal economic classes. But they see clearly that in actual life these conditions have become more and more rare.<sup>23</sup>

The majority of the work done by Fetter prior to and during the 1920's bears little direct relation to concentration and the anti-trust laws; but, like J. M. Clark with his studies in overhead costs, Fetter was examining underlying features of both theory and the real world of economics, and was paving the way for further work in the 1930's which would probe into the efficacy not simply of laissez faire, but of the competitive process itself. He had been concerned with value theory and the problems of comparing satisfaction of wants among individuals. In this connection, he had been prominent in the "psychological school" of American economists.<sup>24</sup> He called for a further and deeper study of "the human factor in the economic relationship," and expressed a faith that "Economics is at last pretty fully emancipated from the bonds of a mere price conception."<sup>25</sup> Another field that caught Fetter's interest was the economics of location. He felt that market boundaries set by plant location, price, and freight rates had escaped attention in the United

<sup>23</sup> "The Economists and the Public," *American Economic Review*, XV, no. 1 (March, 1925), 19.

<sup>24</sup> For a discussion of this "school" and Fetter's role therein, see Wesley C. Mitchell, "The Role of Money in Economic Theory," Papers and Proceedings of the Twenty-eighth Annual Meeting of the American Economic Association, *American Economic Review*, VI, no. 1 (March, 1916), 145-149.

<sup>25</sup> "Value and the Larger Economics," Part II, *Journal of Political Economy*, XXXI, no. 9 (Dec., 1923), 800, 803.



States and were of significance in drafting and administering reasonable laws concerning public regulation of prices.<sup>26</sup>

However, despite his determination to avoid dogmatism, Fetter did not escape the problems raised by the debate on naturalness. In the 1924 edition of his textbook, *Modern Economic Problems*, Fetter noted, "The policy that one is inclined to favor regarding industrial trusts depends very much on one's answer to the question: Are or are not industrial trusts natural growths?" And a little further on:

Now, when one examines the methods that the notable trusts actually did employ, and apparently had to employ, even when they were already powerful single enterprises, in order to destroy their competitors and attain their monopolistic power, the word "natural" seems hardly to describe the process.<sup>27</sup>

In evaluating the Sherman Antitrust Act, Fetter commented that its approach through mere prohibition was negative, that the results of dissolution in the American Tobacco and Standard Oil decrees had been "absolutely futile," but that it could be effective in preventing the formation of new combinations if it were vigorously enforced. He had much higher hopes for the efficacy of the 1914 legislation, but felt, in 1924, that it was too soon after the war to evaluate properly the Federal Trade Commission and Clayton Acts.<sup>28</sup>

In 1931, Fetter unleashed a scathing, vitriolic attack on industrial concentration in his *The Masquerade of Monopoly*, a popularized account, dedicated to "a nation of victimized consumers, and, not less sincerely, to a nation of victimized business men. . . ."<sup>29</sup>

In this book, Fetter reviewed the history of a "gentleman crook,"<sup>30</sup> Monopoly, and the failure of the courts to penetrate his various disguises or to see the harmful economic effects of monopolistic practices. In particular, Fetter singled out as Monopoly's favorite disguise basing-point pricing, or any system of delivered prices where the seller could absorb some or all of the transportation cost, or charge nonexistent freight. Much of Monopoly's

<sup>26</sup> "The Economic Law of Market Areas," *Quarterly Journal of Economics*, XXXVIII, no. 2 (May, 1924), 520-529.

<sup>27</sup> (Second ed.; New York: Century Co., 1924), pp. 533-534.

<sup>28</sup> *Ibid.*, pp. 531, 530, 537-539.

<sup>29</sup> New York: Harcourt, Brace & Co., 1931, p. vii.

<sup>30</sup> *Ibid.*, p. 3.

power would vanish if this disguise were penetrated and if the courts would, while leaving sellers free to charge any price that they wished, require an open market in which prices were announced publicly as of some point, whether mill or warehouse, and in which goods would be sold on stated terms to all comers. In this way, the greatest weapon of Monopoly, price discrimination, would be eliminated.

Fetter made a strong plea for a return to a competitive market, but recognized the difficulties attendant on such a program. He made very clearly the point that a competitive order is not a natural order in today's world. He commented, with extremely doubtful historical accuracy, that there was a period, between 1750 and 1850, of fairly effective competition in the United States and England. However, this competition was transitory, "a mere passing episode between the earlier stage of feudal custom, status, and monopolistic privileges (mitigated by royal decrees and by markets and fairs) and the newer industrial feudalism of the last half-century (mitigated as yet by rather futile attempts to prevent restraint of commerce)."<sup>31</sup> In order to achieve and maintain a competitive economy, Fetter noted, it would be necessary to enforce the Sherman and Clayton Acts with far more vigor and more application of economic principles than had previously been the case. Yet more than laws and even a physical structure of markets conducive to competitive behavior were needed. Essentially, Fetter observed, competition results from the ideals, ethics, habits, and practices of the people. Competition, he concluded, must be understood and culturally accepted in order to succeed. For this reason, evidently, the earlier century of competition which he envisaged was important to him as having created a social atmosphere which could be revived.

*The Masquerade of Monopoly* was one of the last and one of the best known of the works written in the tradition established during the 1920's. The most significant approach in that period was to examine some phase or phases of the industrial structure, point to specific problems or abuses, and propose steps to restore competition as an automatic regulator. The assumption was made implicitly, or stated cursorily with little elaboration, that competition could be relied upon to bring about desired goals such as a product mix

<sup>31</sup> *Ibid.*, p. 266.

accurately reflecting consumer preferences, prices low enough just to cover costs, and the widespread use of the most efficient possible processes of production.<sup>32</sup> The next step, made possible by the overthrow of *laissez faire*, was an investigation of the competitive process itself, and a severe questioning of the older faith. This attack was no doubt given a sense of urgency by depression experiences, but it now seems to have been a logical development from the work of men such as F. A. Fetter and J. M. Clark who had earlier sought a realistic orientation of theory towards the twentieth-century American economy.

By the time that *The Masquerade of Monopoly* was published two major issues, concerning the naturalness of the trust movement and the value of *laissez faire* as a social regulator, had been quite thoroughly explored and debated. *Laissez faire* survived only as a slogan and was no longer of any importance as a guide to economic policy. By and large, it had been rejected by the economics profession, by the law, and even by enthusiastic protagonists of the new business order such as A. J. Eddy. And if *laissez faire* was no longer of importance, it was of little philosophic concern whether the trusts were natural creatures.

Yet Fetter's work continued to be influenced by a preoccupation with naturalness, and his analysis suffered for it. It would seem, for example, that he had little to gain by arguing that the United States and Great Britain passed through a century of competition in the transition from a period of feudalism and special privilege to one of modern industrial concentration. Fetter had made it clear that he did not regard as natural the methods used by the trusts to achieve dominance. Yet he maintained that competition was not a part of the natural order in the modern world and would have to be supported by governmental action designed to limit or destroy monopoly. Presumably, then, it was important to him to show that the sort of competitive order which he envisaged as natural from 1750 to 1850 could be reinstated by such action.

<sup>32</sup> This is not, strictly speaking, an accurate summary of J. M. Clark's work on the economics of overhead costs. Clark had pointed to the existence of a factor which hampered the operation of competition, and which could not be removed. Nevertheless, he felt that healthy competition could give the best approximation to generally desired goals if destructive aspects such as pricing below cost could be removed by pressure from the business community or by a general awareness of long-run considerations.



If this analysis of Fetter's concern over naturalness is correct, then his case for antitrust action and his attack on monopolistic elements would be weakened by a showing that free competition was not a natural economic condition from 1750 to 1850 or at any other time. By referring to the absence of national markets, poor transportation and communication facilities, and the subsequent reliance of most individuals on a single village store or blacksmith, a very strong case could be made that the natural economic order of Fetter's transitional period was not competitive as the word is understood today in economic theory. Fetter would have presented a more convincing case had he refrained from bringing naturalness into his argument.

Differences of opinion between J. M. Clark and Fetter as to proper public policy towards the trusts may be, in part, understood by their different concepts of competition. Clark was more tolerant of industrial concentration and co-operation because, for him, competition simply provided a standard against which performance could be measured. He saw no reason to uphold a competitive order on principle when, as in the case of his overhead cost studies, the standards of competition appeared antithetical to the proper functioning of the economic system. Fetter, on the other hand, seemed to regard the competitive order as something real, which could be returned to, and which in theory promised great public benefit; and therefore he advocated stern measures against monopolistic elements.

J. M. Clark, in contrast to Fetter, appears to have been hampered by a lack of specific principles. He is a humanitarian, clearly concerned with material and spiritual welfare; but his approach to any given issue has been pragmatic. Thus, he was opposed to the antitrust laws until they proved effective, and then he supported them on the grounds that they worked. He advocated dissolution of stagnant monopolies, but relied on the good sense of public administrators and judges to enforce the law on a case-by-case basis only against those combinations which were not in the public interest. Noting the problems raised by overhead costs, he hoped that business restraints would prevent competition from becoming destructive but would go no further to the detriment of consumers'

interests. As a result, Clark never suggested a general line of direction for a national policy towards big business, nor did he specify any general objective, despite the clarity and relevance of his analysis in dealing with particular aspects of the problem.<sup>33</sup>

In summary, it would appear that Fetter did not escape from the preconception that naturalness implied virtue or that competition had flourished in an earlier age of *laissez faire*, whereas Clark may have gone too far in the other direction under the influence of pragmatism. Nevertheless, these two men, each combining an understanding and respect for economic theory with incisive analysis of existing conditions and practices, made important contributions to the study of business concentration; and their influence was felt widely.

By the end of the 1920's examinations into the specific methods employed by the trusts were becoming popular, and a number of case studies of specific industries and firms appeared in the last years of the decade. Economists were showing an increased respect for the potentialities of the antitrust laws; and they had words of high praise for the methods and philosophy of the Federal Trade Commission, which was carrying out thorough investigations into industrial conditions, had established the trade practices conferences, and appeared to be making a genuine effort to understand the problems and practices of the businesses it regulated.<sup>34</sup>

<sup>33</sup> Clark's approach appears to be strongly influenced by the philosophical thought of John Dewey. Note, for example, the consistency between Clark's attitude toward the trust problem and the following passages, quoted from Dewey's *Human Nature and Conduct; An Introduction to Social Psychology* (New York: Henry Holt and Co., 1922):

"In quality, the good is never twice alike. It never copies itself. It is new every morning, fresh every evening" (p. 211).

"When ends are regarded as literally ends to action rather than as directive stimuli to present choice they are frozen and isolated. It makes no difference whether the 'end' is a 'natural' good like health or a 'moral' good like honesty. Set up as complete and exclusive, as demanding and justifying action as a means to itself, it leads to narrowness; in extreme cases fanaticism, inconsiderateness, arrogance and hypocrisy" (pp. 227-228).

"We recur to our fundamental propositions. Morals is connected with actualities of existence, not with ideals, ends and obligations independent of concrete actualities. The facts upon which it depends are those which arise out of active connections of human beings with one another, the consequences of their mutually intertwined activities in the life of desire, belief, judgment, satisfaction and dissatisfaction" (p. 329).

<sup>34</sup> P. T. Homan, "Industrial Combination as Surveyed in Recent Literature," *Quarterly Journal of Economics*, XLIV, no. 2 (Feb., 1930), 345-375.

### C. The Attack on Competition

Hostility and suspicion towards business and businessmen, which had been prevalent during the early trust days of the 1880's and 1890's, and had declined steadily through the first three decades of the twentieth century, rose again with the onslaught of the Great Depression.<sup>35</sup> The failure of a free enterprise system to sustain acceptable levels of production and employment seemed glaring, and was highlighted by governmental attacks and investigations.<sup>36</sup> It was a period of widespread radicalism, and of a severe attack on the foundations of a capitalistic society by popular and respected literary figures, some of whom saw imminent revolution in the social framework.<sup>37</sup> However, the great majority of professional economists who wrote on problems of business concentration during the 1930's managed to stay clear of ideological trappings, although in many cases their writings took on a new urgency and force. The most prominent aspect of the literature during this decade was a growing skepticism towards the efficacy of competition. Three lines of inquiry were of particular importance: the development of the theories of monopolistic and imperfect competition now associated with E. H. Chamberlin and Joan Robinson, the work of A. A. Berle and G. C. Means on the separation of

<sup>35</sup> For an interesting informal account of the popular prestige achieved by industry and finance by 1928, at least in the eyes of political leaders, see the account of that year's presidential election in F. L. Allen, *Only Yesterday* (New York: Harper & Bros., 1933), pp. 300-304.

<sup>36</sup> Gross national product, in constant (1939) dollars, fell from 85.9 billion in 1929 to 61.5 billion in 1933, or in current dollars from 103.8 billion to 55.8 billion. U. S. Bureau of the Census, *Statistical Abstract of the United States: 1953* (74th ed., Washington: Government Printing Office, 1953), pp. 279, 280. Investigations, primarily of the New York Stock Exchange, were made by the Senate Committee on Banking and Currency from 1932 to 1934, and by the Securities and Exchange Commission in 1938. The structure of the United States' economy was investigated by the Temporary National Economic Committee, 1938 to 1941. See especially the President's message urging the need for such an investigation in U. S. Temporary National Economic Committee, *Investigation of Concentration of Economic Power, Hearings, Part 1, "Economic Prologue"* (Washington: Government Printing Office, 1939), pp. 185-191.

<sup>37</sup> For example, see John Steinbeck, *The Grapes of Wrath* (New York: Viking Press, 1939), p. 592. "The women watched the men, watched to see whether the break had come at last. The women stood silently and watched. And where a number of men gathered together, the fear went from their faces, and anger took its place. And the women sighed with relief, for they knew it was all right—the break would never come as long as fear could turn to wrath."



ownership and control of the modern corporation and on the growth of concentration, and the analysis by J. M. Keynes of unemployment in a modern economy. Virtually all of the significant work done during the 1930's on big business and concentration was influenced or inspired by these writers.

First, partial equilibrium theory was used with increasing rigor and refinement to explore the equilibrium positions of firms which faced market structures somewhere in the broad range between monopoly and pure competition. The rejection of mutually exclusive definitions of monopoly, duopoly, and competition was completed with the appearance in 1933 of the studies by E. H. Chamberlin<sup>38</sup> and Joan Robinson.<sup>39</sup>

Economists had long recognized the artificial nature of the sharp distinction between monopoly and competition. A common approach in the textbooks of noted economists during the first three decades of the twentieth century was to describe in some detail the price and output determination under both competition and monopoly and to observe that, in fact, the influences of both competition and monopoly operated on most firms in their individual pricing policies. Factors which might temper both monopoly and competition were customarily noted and discussed with varying degrees of completeness.<sup>40</sup>

In 1926 formal analysis of the cost and demand schedules of firms between the limits of monopoly and competition was offered by Piero Sraffa,<sup>41</sup> in an article which, unlike F. C. Hicks's earlier writings, exerted great influence on subsequent students of the problem. Sraffa, concerned with diminishing costs, noted as an empirical judgment that many firms which could not be regarded as monopolistic probably felt that they could lower unit costs if they could only increase sales; and from this observation he suggested that in many cases the limits of production for in-

<sup>38</sup> *The Theory of Monopolistic Competition* (Cambridge: Harvard University Press, 1933).

<sup>39</sup> *The Economics of Imperfect Competition* (London: Macmillan & Co., Ltd., 1933).

<sup>40</sup> See, for example: E. R. A. Seligman, *Principles of Economics* (1st ed.; New York: Longmans, Green, & Co., 1905), pp. 347-350; F. A. Fetter, *Economic Principles* (1st ed., New York: Century Co., 1915), pp. 381-382; J. Viner, "Price Policies: The Determination of Market Price," *Business Administration*, ed. L. C. Marshall (Chicago: University of Chicago Press, 1921), pp. 343-347.

<sup>41</sup> "The Laws of Returns under Competitive Conditions," *Economic Journal*, XXXVI, no. 144 (Dec., 1926), 535-550.

dividual firms must be set by the relevant demand curves which sloped downward more steeply than the firms' cost curves. The equilibrium position of a firm in such a situation, Sraffa stated, could be described by the theory of monopoly price; yet the firm would not be "an actual monopoly" but rather would have "merely a particular market." The equilibrium would be determinate, as the elasticity of demand for the firm would be set by its "special services or the distinguishing features";<sup>42</sup> yet competition with similar firms would prevent the equilibrium from being that of monopoly. Sraffa noted the ever-present danger of collusion leading to monopolistic prices, but he stated that entry would be possible when profits rose above the normal level for any given trade.

Mrs. Robinson approached the problem through the application of the theory of monopolistic equilibrium to other industries which she labeled as "imperfectly competitive." She acknowledged a primary indebtedness to Sraffa, as well as to E. A. G. Robinson and G. H. Shove. In her Foreword she stated, "Mr. Sraffa's article must be regarded as the fount from which my work flows, for the chief aim of this book is to attempt to carry out his pregnant suggestion that the whole theory of value should be treated in terms of monopoly analysis."<sup>43</sup> Chamberlin, on the other hand, cited Sraffa's article and noted that his own ideas had been independently formulated before its appearance. Chamberlin, who described his concept of monopolistic competition in terms of monopolistic elements pervading competition, has maintained that his theory differs significantly from Mrs. Robinson's imperfect competition.<sup>44</sup>

The distinctions made between the works of these two need not concern us here. What is important is that, by the use of the marginal revenue curve, elements of monopolistic power were illustrated in all market categories but that of pure competition.<sup>45</sup>

<sup>42</sup> *Ibid.*, pp. 546, 549.

<sup>43</sup> Robinson, *op. cit.*, p. v.

<sup>44</sup> Chamberlin feels that Mrs. Robinson, in her explanation of the slope of the firm's demand curve, is not aware of the monopolistic elements inherent in modern business with product differentiation. Rather, he argues, there is still a dichotomy between monopoly and competition in her mind, and she relies on the concept of an industry of several or many firms producing homogenous commodities in order to define imperfect competition. See *The Theory of Monopolistic Competition* (6th ed., 1950), chap. ix, pp. 191-218, especially pp. 209-210.

<sup>45</sup> Mrs. Robinson states explicitly that she is indebted to the prior work of

In any case in which the seller had to accept a smaller price in order to increase sales, or in which he felt that there was only a limited amount which he could sell at a given price, or in which he felt that he could ask for a higher price, losing some but not all of his sales, there was a marginal revenue curve, sloping more steeply than the firm's demand curve. If this marginal revenue curve was exploited so as to maximize profits, then prices would be higher and output lower than would have been the case under perfect competition, assuming the same cost curves for the firm and the same demand curve for the industry. In summary, the work of Chamberlin and Robinson developed two themes at length—first, monopoly power was a matter of degree, and second, most business firms outside the area of agriculture might be presumed to possess this power to some extent.

Two results of the Robinson-Chamberlin theory led to particularly serious reservations as to the social efficacy of monopolistic or imperfect competition. First, both realized that the demand curve facing a seller in less than perfect competition might not be independent of his rivals' actions. Mrs. Robinson noted the problem and dismissed it rather summarily:

Thus if one [firm] raises its price the demand curves for the others will be raised. This may cause them to raise their prices also, and the rise in their price will react upon the demand for the commodity of the first firm. In drawing up the demand curve for any one firm, however, it is possible to take this effect into account. The demand curve for the individual firm may be conceived to show the full effect upon the sales of that firm which results from any change in the price which it charges, whether it causes a change in the prices charged by the others or not. It is not to our purpose to consider this question in detail.<sup>46</sup>

However, in discussing the effects of a tax on unit output, Mrs. Robinson suggested the complications which might arise from a kinked demand curve:

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many economists for the concept of a marginal revenue curve. She mentions C. H. P. Gifford, P. A. Sloan, R. F. Harrod, T. O. Yntema, E. Schneider, H. von Stackelberg, J. K. Mehta, and Jacob Viner, and then observes that there are probably others who have used such a device (*op. cit.*, pp. vi-vii). Chamberlin commented recently that he feels that Mrs. Robinson exaggerated the importance of the marginal revenue curve, which cannot be used to illustrate anything not amenable to analysis by total or average revenue curves (*The Theory of Monopolistic Competition*, 6th ed., pp. 192-193).

<sup>46</sup> *Op. cit.*, p. 21.



A monopolist may have some advantage over his rivals, whose costs are higher than his, but he may be aware that if he raises his price beyond a certain critical level his rivals will find it profitable to produce and will begin to invade his market. Above this critical price, therefore, his demand curve suddenly becomes very elastic, and even when his costs are augmented by the tax he will not find it worth while to raise his price above this critical level, provided that his rivals are not also subject to the tax.<sup>47</sup>

Chamberlin pursued this idea much further. His discussion was not limited to the case of a unit tax, and he indicated that recognition of competitors' reactions might be found frequently. Indeed, he argued, the only behavior consistent with the assumption of rational profits maximization was behavior based on predictions as to one's effects on rivals and their most likely reactions, wherever such predictions were possible.

From this observation Chamberlin derived the two cases of mutual dependence recognized and mutual dependence ignored. Where mutual dependence is fully recognized, price and output for an industry consisting of only a few firms could settle at monopolistic levels, even without any of the collusive practices prohibited by the antitrust laws. Where uncertainty exists, Chamberlin noted, so that the mutual dependence is partially or entirely ignored, there will be an indeterminate range of equilibrium positions, varying from monopolistic price and output to those of perfect competition.<sup>48</sup>

If the number of firms becomes so large that no one firm can predict the effects of its actions on rivals or their responses, then one or more of the firms may come to believe that competitors will not react to its policies. In such a case, the firm would revise its estimate of the demand curve facing it, assuming greater elasticity than before, and presumably it would reduce its price. In such a situation, if rivals did respond, the process of price cutting might

<sup>47</sup> *Ibid.*, p. 81. The author illustrates this text with a diagram showing a kinked demand curve and a discontinuous marginal revenue curve.

<sup>48</sup> This problem was further investigated by Heinrich von Stackelberg who, in his study *Marktform und Gleichgewicht* (Vienna: Julius Springer, 1934), formulated "reaction functions" to ascertain the equilibrium positions of firms in oligopolistic situations. In cases where more than one firm felt that leadership was profitable, Stackelberg found no stable equilibrium. For a penetrating criticism of Stackelberg's indifference curve analysis, see William Fellner, *Competition Among the Few* (New York: Alfred A. Knopf, 1949), chap. iii.

not stop until the demand curve for each firm was tangent to its average cost curve and monopolistic profits were eliminated. This was the equilibrium situation which Chamberlin posited for his monopolistic competition.

An interesting development, arising from the kinked demand curve and Chamberlin's analysis of mutual dependence, was the concept of an "imagined demand curve"<sup>49</sup> in which the seller assumed that price rises would not be followed, but that price cuts would be. In this case his "imagined demand curve" would be far more elastic at prices above the current one than at prices below. Such a kink would give rise to a marginal revenue curve which had a gap or discontinuity directly below the current price. If the marginal cost curve passed through this discontinuity, as it would have to for the firm to be in equilibrium, prices would remain stable despite fairly large shifts in costs. P. M. Sweezy suggested that the actual existence of such kinks might explain prevalent price rigidities, as he felt that these assumptions were applicable to many oligopolistic industries.<sup>50</sup>

The second result of the Robinson-Chamberlin theories can be stated more briefly. Even without mutual dependence recognized, the final equilibrium positions of imperfectly or monopolistically competitive firms are not such that there is the optimum allocation of resources which follows in theory from pure and perfect competition. In either case, final equilibrium is achieved for an industry when there are no profits and no tendency for net entry to or exit from the industry. This posits, for the typical, or average, firm, an average cost curve which lies above the average revenue curve at all points except one of tangency. However, where the demand curve slopes downward, as it will for the firm in monopolistic or imperfect competition, this point of tangency must occur

<sup>49</sup> P. M. Sweezy, "Demand under Conditions of Oligopoly," *Journal of Political Economy*, XLVII, no. 4 (Aug., 1939), 568-573. Sweezy attributes the term "imagined demand curve" to Nicholas Kaldor.

<sup>50</sup> Sweezy also suggested that, for a price leader who believed that he could make secret price cuts or concessions, the kink would be reversed, or more elastic along the lower range. For a criticism of the empirical content of this concept, see George Stigler, "The Kinky Oligopoly Demand Curve and Rigid Prices," *Journal of Political Economy*, LV, no. 5 (Oct., 1947), 432-449. Stigler finds, for example, greater price rigidities among monopolistic firms than among oligopolistic ones, although presumably the former would have no kinks in their demand curves.

where average cost is still falling, or where output is less and price higher than would obtain under competition.<sup>51</sup>

This theoretical attack against the reliance on automatic competition was bolstered by a concurrent onslaught from another quarter. A. A. Berle and G. C. Means, using empirical weapons, demonstrated how the management of business property now takes place in an institutional setting in which the incentives of competition are lost or vitiated; and they attempted to measure statistically the extent to which the concentration of business activity had gone already and threatened to go in the future.<sup>52</sup>

The institution of private property meant, for Berle and Means, a system in which both ownership and control of property rested in the hands of one owner. Traditional economic theory, they argued, assumed the existence of an owner-manager, who was motivated by the possibility of profit to risk his property in productive enterprise and who was forced, in order to earn profits, to operate his enterprise as efficiently as possible. But the modern corporation had split this atom of property so that the stockholder had only a passive ownership interest; and control lay with another group, management. For Berle and Means, the quasi-public corporation raised issues of overwhelming importance:

The explosion of the atom of property destroys the basis of the old assumption that the quest for profits will spur the owner of industrial property to its effective use. It consequently challenges the fundamental economic principle of individual initiative in industrial enterprise. It raises for reexamination the question of the motive force back of industry, and the ends for which the modern corporation can be or will be run.<sup>53</sup>

The most dramatic feature of the Berle and Means study, however, was a set of statistics on the growth and dominant positions of the nation's two hundred largest non-financial corporations. These statistics, the results of which are by now familiar to even the

<sup>51</sup> At first sight, this appears utterly inconsistent with Chamberlin's earlier statement that with sufficient uncertainty, price and output would approximate those of pure and perfect competition. This seeming inconsistency is due to the fact that in his earlier chapter Chamberlin is analyzing the famous problem of Cournot's mineral springs which are costless and thus have no tangency points.

<sup>52</sup> *The Modern Corporation and Private Property* (New York: Macmillan Co., 1932).

<sup>53</sup> *Ibid.*, p. 9.



most casual student of industrial concentration, seemed, at the time of their presentation, an imposing refutation of the existence of a competitive economic order, as such an order was envisaged by economists. Berle and Means first traced the growth of the corporate form, predicting that we might "look forward to a time when practically all economic activity will be carried on under the corporate form."<sup>54</sup> They noted that it was the quasi-public type of corporation, in which ownership and management were recognized as separate functions, that was becoming dominant. Means's famous two hundred non-financial corporations controlled, as of January 1, 1930, 49.2% of all non-banking corporate wealth, and they earned 43.2% of the income in this category and controlled roughly 38% of all business wealth of the country.<sup>55</sup> Further, these two hundred appeared to be growing rapidly relative to the rest of the nation's business institutions. Berle and Means estimated that, if the rates of growth from 1909 to 1929 were sustained, the two hundred largest non-financial corporations would carry on 70% of all corporate activity by 1950.<sup>56</sup>

In their conclusions Berle and Means felt that neither the traditional legal concept of private property nor the economist's basic assumption as to profit-maximizing activity had any relevance to this new institution which dominated the twentieth-century American economy. Somewhat lamely, they observed:

Neither the claims of ownership nor those of control can stand against the paramount interests of the community. The present claims of both contending parties now in the field have been weakened by the development described in this book. It remains only for the claims of the community to be put forward with clarity and force.<sup>57</sup>

<sup>54</sup> *Ibid.*, p. 17.

<sup>55</sup> *Ibid.*, pp. 28-31.

<sup>56</sup> *Ibid.*, p. 40. But this growth was not sustained. In 1951 M. A. Adelman found indications of an actual fall in the degree of industrial concentration, but he warned that the statistical data and methods of measuring concentration were not adequate to draw firm conclusions. However, he noted, "Concentration may be a problem, but for better or worse it is not threatening to engulf the economy." See Adelman's "The Measurement of Industrial Concentration," *Review of Economics and Statistics*, XXXIII, no. 4 (Nov., 1951), 269-296, quotation taken from p. 296. See also comment by Berle in the same *Review*, XXXIV, no. 2 (May, 1952), 174: "Adelman's able statistical review is a refreshing dose of fact in a welter of controversy."

<sup>57</sup> *Op. cit.*, p. 356.

J. M. Keynes's *The General Theory of Employment, Interest and Money*,<sup>58</sup> is not a work with a direct impact on the area of business concentration. Yet surely it deserves notice in any discussion of the contributions made during the 1930's towards the dethroning of competition as an ideal regulatory force. It has had considerable effect, either directly or indirectly, in shaping attitudes in the area now under discussion.

Keynes himself, in the last chapter of the *General Theory*, deals quite cavalierly with the problem of industrial structure:

If we suppose the volume of output to be given, i.e., to be determined by forces outside the classical scheme of thought, then there is no objection to be raised against the classical analysis of the manner in which private self-interest will determine what in particular is produced, in what proportions the factors of production will be combined to produce it, and how the value of the final product will be distributed between them. . . .

To put the point concretely, I see no reason to suppose that the existing system seriously misemploys the factors of production which are in use. There are, of course, errors of foresight; but these would not be avoided by centralising decisions. When 9,000,000 men are employed out of 10,000,000 willing and able to work, there is no evidence that the labour of these 9,000,000 men is misdirected. The complaint against the present system is not that these 9,000,000 men ought to be employed on different tasks, but that tasks should be available for the remaining 1,000,000 men.<sup>59</sup>

It seems apparent that Keynes felt that the "classical analysis," so far as it related to the allocation of resources in use, is applicable to the "existing system." This passage must have jarred readers who had only recently become acquainted with the works of Robinson, Chamberlin, and Berle and Means. However, the degree of competition in an economy did not concern Keynes—he took it as one of his "givens" in constructing his system. Keynes's basic concern was with the fact that unemployment existed and could not be explained within the classical framework.

In observing that the existing system probably did not seriously misallocate the resources that it did use, Keynes was running counter to much that has been traced above. It need hardly be commented that the Keynesians did not expect vigorous antitrust enforcement

<sup>58</sup> London: Macmillan & Co., Ltd., 1936.

<sup>59</sup> *Ibid.*, pp. 378-379.

to end the depression and bring a return to full employment.<sup>60</sup> Yet Keynes clearly supplied ammunition to those who felt, generally and perhaps vaguely, that competition could not be relied upon as a universal cure for the ills of a twentieth-century industrial economy. On the other hand, as we shall see, the Keynesian apparatus was promptly utilized to support arguments condemning business concentration for new sins, such as lowering the nation's marginal propensity to consume, raising scheduled savings, and dampening investment, all to the effect of reducing national income and employment.

<sup>60</sup> For an account of the conflicting outlooks of Keynesians and antitrust enthusiasts in the New Deal administration, see J. K. Galbraith, "Monopoly and the Concentration of Economic Power," *A Survey of Contemporary Economics*, Vol. I, ed. H. S. Ellis (Homewood, Illinois: Richard D. Irwin, Inc., 1952), pp. 115-116.



### *Chapter Three; ECONOMICS AND ANTI-TRUST POLICY DURING THE 1930'S AND THE SECOND WORLD WAR: THE ROLE OF COMPETITION IN A MODERN SOCIETY*

#### *A. Reactions to the Theories of Monopolistic and Imperfect Competition*

By 1937, although the problems in the area of business concentration and public policy remained similar to those of 1930, it had become necessary to rephrase the old questions and to look for new answers. But in a very real sense the contributions of Robinson, Chamberlin, Berle and Means, and Keynes were negative or incomplete. Robinson and Chamberlin had transformed the dichotomy between monopoly and competition into a continuous spectrum, but they did not offer criteria for assessing the social significance of monopolistic or imperfect competition. Berle and Means had thrown a spotlight on the structure of American industry and had popularized statistical measures and techniques which served as models for further empirical studies;<sup>1</sup> but their analysis of the significance of their findings reflected near-hysteria and left much to be done along this line of inquiry. Keynes had suggested that the degree of competition was not particularly important and that it was necessary to look to hitherto unrecognized factors on a macro-economic level to explain the failures in a free-enterprise economy's performance, yet he had provided analytical tools for others to manipulate in dealing with problems of business concentration.

<sup>1</sup> See, for example, U. S. National Resources Committee, *The Structure of the American Economy* (Washington: Government Printing Office, 1939), pp. 270-296. This study, prepared under the direction of G. C. Means, makes further statistical analyses of the position of the two hundred largest non-financial corporations, on the pages cited.

See also U. S. Temporary National Economic Committee, *op. cit.*, monograph no. 27, "The Structure of Industry," pp. 581-591, for a statistical study of the fifty largest manufacturing companies.

The present section traces developments in economic literature of the 1930's and early 1940's which seem to follow with some logic from the works of Robinson and Chamberlin. The next two sections will deal in a similar manner with writings more closely related to the work of Berle and Means and to the Keynesian system. Obviously, the categorizing cannot avoid being inexact, as the subsequent literature bears the influence of all these works.

One of the earliest works showing the influence of Robinson and Chamberlin, offering a definite assessment of the dangers of concentration and a consideration of possible remedies, was Arthur Robert Burns's *The Decline of Competition*.<sup>2</sup> The central portion of Burns's book contains a survey of current industrial practices, with chapters on the trade association and industrial institute, price leadership, market sharing, price stabilization, price discrimination, non-price competition, and integration of industrial operations. Burns's study is still a valuable and interesting source on these specific practices.

Burns's conclusions are highly pessimistic. In the opening paragraph of his first chapter he states flatly that, after a thorough trial in this country since the end of the Civil War, competitive capitalism has completely failed to preserve its competitive character.

One of the basic reasons, Burns indicates, for the failure of competitive capitalism is that given by Berle and Means. Widespread use of the corporate form, encouraged by the policies of the various states permitting easier and more general incorporation of business, has virtually eliminated the owner-manager from many of the most important sectors of industry and commerce. Thus, decisions are not made by owners who receive the full profit earned by correct decisions and suffer the full loss resulting from error.

Burns believed that the antitrust laws had failed utterly in their avowed purpose of preserving competition. By suppressing collusive agreements, they had merely fostered mergers. When dissolution had been resorted to, the courts had left industries dominated by three or four giant firms; and competition, to Burns's mind, could not possibly work in such industries. In fact, competition could not work effectively in most of America's industries.

<sup>2</sup> New York: McGraw-Hill Book Co., 1936.

Competition could not perform its functions, he thought, because modern conditions of production and sale are such as to preclude its efficient operation. Following Chamberlin, Burns cited the recognition by large sellers that their price policies would affect not only their own sales but those of competitors as well. Further, under modern selling conditions, there would be a time lag between a reduction in price and the desired effect of increased sales. "The reaction time of buyers to a price reduction," Burns commented, "may be long because reallocation of purchasing power is a slow process." In other words, price elasticity of demand may be greater in the long run than in the short run. The longer the time lag, the less the motivation to price reduction.<sup>3</sup>

Modern technological conditions of production are also unfavorable to competition. Most important, to Burns's mind, was the increase in significance of overhead costs. Where unused capacity exists and overhead is high, there is a tendency towards price cutting which presents so serious a danger that producers are forced to strive actively to check price competition in their industries in order to prevent selling below cost from ruining them all. And under modern conditions such excess capacity is to be expected. Excess capacity can exist in the Robinsonian and Chamberlinian cases where the producer faces a marginal revenue curve distinct from his demand curve and hence does not produce at the least-cost output. Further, optimum size is often so large that the addition of one more firm means the difference between excess profits for existing firms and subnormal returns and excess capacity throughout the industry. Demand has to be estimated in advance over the lifetime of capital goods, and often such estimates are optimistically wrong. New durable goods have a high initial demand and then a much lower replacement demand, so that the initially required capacity becomes excessive. Geographical shifts in demand or the discovery of lower costs in new areas may leave excess capacity in the old areas of production. In some industries, improved methods of production have made overproduction a problem. Finally, cyclical fluctuations cause some firms to invest

<sup>3</sup> *Ibid.*, p. 27. Burns discussed this problem solely in terms of price reduction. In the case of a contemplated rise in prices, two forces would seem to work in opposite directions. The reaction of rivals—their possible refusal to follow—would act to discourage the change; but the time lag in reallocation of purchasing power would evidently be an encouraging influence.



up to the point where they can meet peak demand although they realize that excess capacity will exist during the rest of the business cycle.

Price and output decisions are complicated by the fact that few firms produce a single unvariable product and many produce multiple products; often detailed cost calculations are impossible to make. Modern production is in many cases of a nature where output is relatively fixed in the short run regardless of price fluctuations, and investments made in natural resources become fixed costs. Price competition in these fields threatens to reduce revenue until interest on capital is not being met.

Under Burns's conditions, as outlined above, competition as envisaged in economic theory simply could not work. It would tend towards universal losses and industrial chaos. Virtually as a natural consequence, businessmen have evolved the trade practices and restraints that Burns describes in such detail. Had they not done so, they would not have survived as businessmen. The result is a widespread misallocation of resources, inability to adapt to changing conditions, barriers to entry and to expansion, price rigidities, uneconomic location of enterprises, wasteful non-price competition, and reduction in competitive pressures on behavior.

Burns felt that competition could not be restored and that a program of restoration by government would be self-defeating, as competition cannot operate in an atmosphere in which the inducements to expand and to capture greater shares of the market are negated by antitrust actions. The only solution was acceptance of the existing structure, but with severe enough governmental intervention in pricing and investment decisions to permit public rather than private determination of the nation's output.

However, Burns's viewpoint was quickly challenged. The most effective and influential rebuttals of his conclusions came first from F. A. Fetter and, at the end of the decade, from J. M. Clark. It is significant to note that neither Fetter nor Clark fell back on traditional economic theory, and neither made any effort to support the old view that pure and perfect competition leads to an ideal allocation of resources and thus should be preserved insofar as possible. Both men wrote in the tradition which they had done so much to establish and which Burns certainly followed, that of looking directly at the facts of modern industrial structures and behavior and apply-

ing what they could from the body of theory, while specifically rejecting unacceptable assumptions.

In 1937 Fetter wrote a sharply critical review of *The Decline of Competition*, in which he attacked first Burns's ideas about the inevitability of monopoly and secondly Burns's belief in the necessity of direct governmental intervention in the business sphere.<sup>4</sup> Fetter pointed out that, although Burns had casually recognized the importance of factors such as loose corporation laws and lax enforcement of the antitrust laws, he nevertheless attributed monopoly mainly to technological factors, a mental process which Fetter described as "a vagueness and vacillation of thought with regard to the advantages of size and its influence upon competition which pervade the whole book."<sup>5</sup>

Fetter felt that Burns had made a genuine contribution in his survey of current industrial practices but had made no effort even to examine the possibility of reforming these practices. Yet, Fetter claimed, Burns naïvely assumed the ability of the state to guide and regulate such complex phenomena as price and investment policies.

Fetter was not fighting for a system of pure and perfect competition. In his review of Burns's book he cited the contributions of Robinson and Chamberlin as adding relevance and realism to economic theory.<sup>6</sup> Speaking before the Academy of Political Science in 1938, he stated, "The competition we are talking about is *fair* competition, carried on in the light of day and obedient to the rules of the game laid down by society as most in harmony with the public good. It is not unregulated *laissez faire*." He felt that there were urgent political as well as economic reasons for maintaining competition. "The apparition of the totalitarian states," he commented, "has shown how closely related is the condition of free enterprise and fair competition to political and spiritual freedom."<sup>7</sup>

Fetter felt that continued competition, although not of the sort envisaged by classical theory, was compatible with large-scale production. Size alone did not create monopoly, but did so only when

<sup>4</sup> "Planning for Totalitarian Monopoly," *Journal of Political Economy*, XLV, no. 1 (Feb., 1937), 95-110.

<sup>5</sup> *Ibid.*, p. 96.

<sup>6</sup> *Ibid.*, p. 95.

<sup>7</sup> "Competition or Monopoly," an address before the Academy of Political Science, March 25, 1938. *Proceedings of the Academy of Political Science*, Vol. XVIII, May, 1938 (New York: Academy of Political Science, 1938), pp. 100, 102. Italics as in original.

paralleled by practices such as price discrimination and a favorable legislative climate. He continued, as in *The Masquerade of Monopoly*, to fight against the basing-point system of pricing as the worst and most important form of legalized price discrimination. In 1937 an extensive study of the steel industry by C. R. Daugherty, M. G. de Chazeau, and S. S. Stratton came to the conclusion that the continuance of basing-point pricing was essential in that industry.<sup>8</sup> Fetter, in a review article, again expressed his convictions that competition could be maintained and that restrictive devices such as basing-point pricing could and should be eliminated.<sup>9</sup> He feared that the overhead-costs argument was being abused and confused with a vested-rights argument. Mergers, he noted, had led to unwieldy capital structures and to overstatements of assets which had created excessive and economically fictional overhead costs. Such "fictional" costs, real to the firms involved, were then cited to bolster claims, such as those made by the authors under review to the effect that abolition of basing-point pricing would destroy much of the value of existing investments in the iron and steel industry.

In a well-known and reprinted journal article, "Toward a Concept of Workable Competition," J. M. Clark analyzed, without specific reference, many of Burns's points. Clark argued, in essence, that competition had not failed and need not fail as an economic regulator, but that new concepts of just how competition does operate are needed, as are new norms on which to base public policy.<sup>10</sup>

Clark's opening paragraph commented on the current state of economic theory, and his second paragraph implied his criticism of Burns's type of analysis:

Theories of imperfect and "monopolistic" competition have for some time been current, in an unformulated state, in the field of economic policy; and important beginnings have been made at formulation by economic theorists. As a necessary step in this last development, the conception of "perfect competition" has itself for the first time received really specific definition and elaboration. With this has come the realization that "perfect competition" does not and cannot exist and presumably never

<sup>8</sup> *The Economics of the Iron and Steel Industry* (2 vols.; New York: McGraw-Hill, 1937).

<sup>9</sup> "The New Plea for Basing-Point Monopoly," *Journal of Political Economy*, XLV, no. 5 (Oct., 1937), 577-605.

<sup>10</sup> *American Economic Review*, XXX, no. 2, Part I (June, 1940), 241-256.



existed, for reasons quite apart from any inescapable tendency toward collusion, such as Adam Smith noted in his familiar remark on the gettings-together of members of a trade. What we have left is an unreal or ideal standard which may serve as a starting point of analysis and a norm with which to compare actual competitive conditions. It has also served as a standard by which to judge them.

I am not quarreling with the proper use of this standard as an ideal. However, it has seemed at times to lead to undesirable results, in that it does not afford reliable guidance to the factors which are favorable to the closest available working approximation to that ideal, under actual conditions. With this problem the present paper is concerned.<sup>11</sup>

Clark then went on to point out that, in modern industry, where one or more of the conditions of perfect competition are absent, the presence of the other conditions may create a bad or even an intolerable situation. As an example, he cited an industry with all of the attributes of perfect competition. "Take away the saving grace of perfect two-way mobility and leave the other conditions; let demand decline, and competition becomes too strong: you have a 'sick industry' on your hands."<sup>12</sup> For this reason, the government's policy should not simply aim at restoring competitive conditions wherever they were found absent.

He also argued, "At the risk of being convicted of an optimistic bias," that "much of the apparent seriousness of Professor Chamberlin's results derives from what I believe to be the exaggerated steepness of the curves he uses to illustrate them."<sup>13</sup> Clark felt that potential competition and the competition of substitutes play important parts in imperfect competition, and that both of these factors tend to increase the elasticity of the firm's demand curve, particularly in the long run. Clark believed that many large firms are coming to take a long-run point of view, recognizing the threats of potential competition and substitute products, and hence refraining from restrictive practices which would increase short-run profits. Also, long-run cost curves tend to be flatter than the theory seemed to suggest. Clark felt that, generally, there is no precise optimum size of plant, but rather a size range within which there is little or no variation in unit cost.

<sup>11</sup> *Ibid.*, p. 241.

<sup>12</sup> *Ibid.*, p. 242.

<sup>13</sup> *Ibid.*, p. 246.

However, Clark commented that the serious problems of imperfect competition arise in the short run, where competitive stimuli often operate against a movement towards long-run equilibrium. In a section headed *Short-Run Conditions*, he dealt with many of the problems that Burns had raised, but came to conclusions far more optimistic towards the role of competition than had Burns. Some of these problems were treated in illustrative examples, paradoxical in terms of the classical conditions of competition.

First, perfect competition requires identical prices at one time in one market. Yet in large-scale industry, identical prices are often taken to indicate collusion, and it is felt that less knowledge on the part of competitors, which would allow price and quality differentials, is symptomatic of an improved degree of competition. From this observation Clark also concluded that standardized or homogeneous products, although essential to perfect competition, might not favor actual competition and that imperfect knowledge might be favorable.

Next, he argued that workable competition must operate in areas where demand fluctuates over time, so that capacity is not always fully utilized, whereas under perfect competition there is always a tendency towards full utilization of capacity since final equilibrium is achieved at the point of lowest unit cost. Here he repeated briefly many of the arguments found in his works on the economics of overhead cost, to the effect that unrestrained price competition in such conditions would generally be ruinous to the industry.

In connection with these paradoxes, Clark considered two limiting market cases. At one extreme, one could conceive of a chaotic market in which price-cutting seemed highly profitable. "A few hours during which the price-cutter can make fast one very large future order may be as good as a much longer period in an industry where there are no very large buyers or where firm long-term contracts cannot be secured." In such a market one would expect to find widespread fear and suspicion, and continued discriminatory pricing below cost. At the other extreme, a market might exist in which prices were entirely open and uniform. Here one finds the case of mutual dependence recognized and a solution near monopoly price and output. Workable competition, Clark felt, would have to lie somewhere in between these cases, "something intermediate between pure oligopoly and the ruinously low

prices likely to result from unlimited market chaos.”<sup>14</sup> This intermediate case was one in which what Clark called “chiselling,” or price cutting limited to sporadic, secret, and discriminatory practices, existed in a market in which open prices generally predominated. Thus competition might well be workable in an industry in which the trade association or a group of producers constantly fought against chiselling without ever achieving a complete victory; and this might be a fairly common case.

But Clark pinned his final faith on tendencies toward long-run equilibrium positions determined by highly elastic cost and demand schedules. Improved technology and more widespread knowledge of product specifications were, he felt at the time, important forces encouraging competition among substitute products and greater price sensitivity among buyers.

Thus, Clark and Fetter joined forces to defend the competitive economic order against the indictment that it had failed and should be replaced by direct regulation of business practice and policy. But the divergences between the two remained apparent. Fetter’s continued faith in free competition stands in sharp contrast to Clark’s pragmatic tests of the workability of competition and his qualifications of the principle.

Along somewhat different lines, Robert Triffin, in his *Monopolistic Competition and General Equilibrium Theory*, published in 1940, envisaged the new theories of competition as making possible a long-needed bridge between partial (or “particular” in the terminology Triffin prefers) equilibrium and general equilibrium analyses.<sup>15</sup>

Triffin dropped the concept of an industry, and dealt only with firms, commodities, and factors. The firm was defined simply as the unit which sought to maximize profits. In the case of a concern owning several plants or producing several products, the concern was to be treated as one firm if decisions were made taking into account the profit position of the entire concern; or it was to be treated as two or more firms if the policies of each plant or product division were designed to maximize its own profits independently of the concern as a whole. Commodities were defined as the products of specific firms; or, in the case of a multi-

<sup>14</sup> *Ibid.*, pp. 251, 253.

<sup>15</sup> Cambridge, Mass.: Harvard University Press.



product firm, as units between which the entrepreneur himself distinguished. Factors, also, were defined in the latter manner. In this fashion, the way was opened to analyze any firm in its relations to any other firm in the economy. Triffin made this type of analysis through the use of a series of cross-elasticity measures.

Thus, an expression such as

$$\frac{p_j \cdot \delta q_i}{q_i \cdot \delta p_j}$$

where  $p$  represents the price of a commodity and  $q$  the quantity of a commodity sold, can be used to measure the effect on the sales of a firm,  $i$ , brought about by a change in price on the part of another firm,  $j$ . One limiting case would be that in which the firm which lowered price took all sales away from its rival. In such a case, when firm  $j$  lowered its price, the cross-elasticity would be infinite.

The other limiting case would be that in which the sales of firm  $i$  were unaffected by the price changes of any other firm,  $j$ , yielding a cross-elasticity of zero. Between these two limits the coefficient could take any positive finite value. Triffin called these three cases, respectively, homogeneous competition, isolated selling, and heterogeneous competition. Triffin mentioned, but did not discuss, another case which he called heterogeneous complementarity in which  $q_i$  varies inversely with  $p_j$ , yielding a negative coefficient.

Triffin suggested the use of and constructed similar cross-elasticity measures for interdependence of factor prices and sensitiveness of entry (merely an extension of the above, where  $q$  changes from zero to a positive number, or vice versa). He noted that his categories did not coincide with the standard classifications of pure and perfect competition, monopolistic competition, oligopoly, and monopoly. For example, "Among homogeneous competitors, some big firms may be in oligopolistic competition, while minor enterprises have to accept the price resulting from the oligopolists' decisions as a parameter of action."<sup>16</sup>

Triffin felt that his schema added relevance and generality to the theory. He pointed out that the Robinson-Chamberlin type of analysis seemed to put too much stress on the slope of the demand curve. "For most of Professor Chamberlin's and Mrs. Robinson's

<sup>16</sup> *Ibid.* p. 134.

readers, this is the basic distinction between monopolistic (or imperfect) competition, and pure (or perfect) competition.”<sup>17</sup> Further, although monopolistic competition had shifted emphasis from the industry to the firms composing the industry, the theory did not attack inter-industry problems. Also, some of the alternatives were too rigorously defined; for example, Chamberlin dealt with only two cases of entry, open and closed.

In sum, responses to the theories of imperfect and monopolistic competition were varied. Burns regarded them as supporting his thesis that competitive individualism must be abandoned. In their attempts to refute Burns's arguments, Fetter and Clark were clearly influenced by the theories. Fetter stated explicitly that he did not advocate an effort to impose a regime of pure and perfect competition; but, rather, he regarded the maintenance of fair competition as essential. In the 1930's Fetter seemed greatly concerned with political objectives, fearing that concentrated industry would promote totalitarianism. He was willing, then, to accept misallocation of resources under imperfect or monopolistic competition, but remained implacably hostile to monopoly or to oligopolistic collusion. Fetter's indignant reaction to Burns's arguments in favor of accepting business concentration on the grounds that it was a natural, evolutionary development are also interesting. He retained his belief that prohibitions of collusion and discriminatory pricing would suffice to preserve competition. Clark, on the other hand, reacted with his usual pragmatism in simply calling for a workable compromise between competitive and monopolistic elements. The most notable shift in Clark's attitude is his reliance on long-run adjustments to bring about most of the benefits of competition, which stands in sharp contrast with his earlier concern over the essentially short-run problems raised by overhead costs.

One of the most serious shortcomings of the new theories was their inability to assess the quantitative significance of their conclusions. Clearly, the profitless equilibrium of a firm in monopolistic competition more closely approximates the competitive equilibrium than does that of a monopolistic firm or of an oligopolist who recognizes mutual dependence among himself and his rivals. Clark felt that misallocation was exaggerated by the mere depiction of demand curves with excessive slopes. Triffin, clearing his system of

<sup>17</sup> *Ibid.*, p. 5.

the older concept of the industry, did develop an index which, in theory, could reflect differing degrees of misallocation. It should not detract from the importance of such a conceptual measure, however, to observe that difficulties of computing actual cross-elasticities may force an empirical investigator back to regarding as an industry those firms which are assumed to have high cross-elasticities among themselves.

It was, then, impossible either for Burns to demonstrate that the results of the business practices he surveyed were serious enough to warrant his recommendations for regulation, or for Burns's critics to show that misallocation and waste were negligible. However, sufficient doubt was cast on the significance of Burns's assumptions and therefore on the seriousness of his conclusions to support a strong case against increased positive regulation by government and for the preservation of competition and the prohibition of monopolistic practices.

#### *B. Further Considerations of the Modern Institutional Setting of Competition*

Concurrently, economists were investigating the significance of Berle and Means's findings and exploring some of the ramifications of the splitting of the atom of property. Berle and Means had stimulated new interest in the controversy perennially raging around profit theory. Three questions seemed basic: What, exactly, were profits? To whom did profits accrue? And, did profit-seeking play the role that was ascribed to it by theory in an economy of business concentration with a fractured ownership function?

Frank Knight, adhering to the "classical" assumption that profits represent a return to owners, argued that management wages must be excluded, although he recognized that bonuses and excessive salaries represented a distribution of profits.<sup>18</sup> He also excluded the return for supplying capital, as he saw no theoretical distinction between such interest return and rent. This left only the assumption of uninsured risk as the factor to which profits accrued under conditions in which the "owner" of business property is a corporation owned, in turn, by many holders of various types of equity.

<sup>18</sup> "Profit," American Economic Association, *Readings in the Theory of Income Distribution* (Philadelphia: Blakiston Co., 1946), pp. 533-546. Reprinted from *Encyclopaedia of the Social Sciences*, XII (1934), 480-486.



R. A. Gordon, writing two years after Knight's article was published in the *Encyclopaedia of the Social Sciences*, called for a "functional" approach to profits, observing, "Whether the income be called profits or not is of no great significance. What is important is that the separate function be recognized and that the income related to the exercise of this function be studied."<sup>19</sup> Gordon noted, as had Knight, that traditional profit theory related to ownership. This, he felt, was not the appropriate approach to profits of the modern corporation as described by Berle and Means.

Gordon rejected Knight's emphasis on risk-bearing. He felt that this was not adequate to explain even ownership income and that it completely ignored the far more important entrepreneurial function, which he seems to equate, implicitly, with management.<sup>20</sup>

Gordon proposed a three-way breakdown of profits. First, there was the income, contractual or non-contractual, that accrued to the manager-entrepreneur. He realized that some of this income was non-functional, and that the conventional equilibrium analysis might be inadequate to deal with this income. Second, he distinguished the income that arose from ownership, part of which, at least, was a functional return. Third, there was a portion of the income above directly imputed costs which was to be imputed to the institutional position of the firm. Gordon did not, in this article, pursue the subject beyond these suggestions but did point out that there were two problems: first, assigning the function to which profits were in part a return and recognizing the non-functional nature of the remainder; and secondly, determining the distribution of these profits. Distribution need not, to his mind, coincide with function.

Discussions of the nature and role of profits in a modern corporation, such as those by Knight and Gordon, raised more issues than they answered. If profits were functional, were they a return for risk-bearing, decision-making, or, as Schumpeter proposed, for innovation? Or did they simply accrue as returns based on firms' institutional positions? The problem was far more serious than

<sup>19</sup> "Enterprise, Profits, and the Modern Corporation," American Economic Association, *Readings in the Theory of Income Distribution*, pp. 558-570. Reprinted from *Explorations in Economics* (1936), pp. 306-316. Quotation taken from pp. 567-568.

<sup>20</sup> For an alternate interpretation of the entrepreneurial function, see discussion below of J. A. Schumpeter.

one of definition. In cases in which the decision-makers were individuals other than the owners and risk-bearers, the assumptions that profit maximization was a predominant motive and that it operated in a socially beneficial manner might no longer be valid. Perhaps the managers would not be motivated to maximize profits; or if they were, it did not necessarily follow that their actions would be those of a single owner-entrepreneur who performed both the risk-taking and decision-making functions. Thus, separation of ownership and control might lead to a different allocation of resources from that which would obtain in an economy typified by the single owner-manager. It remained problematic whether this new allocation, if it existed, heightened or mitigated the misallocations arising from business concentration and monopoly.

Berle and Means had drawn alarming conclusions from their figures on the extent of industrial concentration. They feared the rise of a new corporate feudalism and thus raised doubts as to the ability of free-enterprise capitalism to survive, or the wisdom of permitting it to continue to evolve unchecked. This theme, with all of its political and sociological overtones, was taken up in utterly opposed variations by James Burnham and J. A. Schumpeter.

In his book *The Managerial Revolution*, Burnham, a former Marxist, held that the separation of ownership and management in the large corporation was only a facet of a far more inclusive and much more important social phenomenon.<sup>21</sup> Burnham envisaged the managers, as a social class, already achieving political and economic dominance in fascist Germany and the Soviet Union, as well as in democratic capitalist countries. For Burnham, capitalism, being unable to cope with periodic crises and periods of unemployment, was archaic; but it was not destined to be replaced by the classless, non-exploitative society described by the Marxists. Rather, throughout the world the managers, those whose function was "technical direction and co-ordination of the process of production,"<sup>22</sup> were assuming control of the economy and gaining more of the remunerations (income and social prestige) of a ruling class.

There was, to Burnham's mind, a fundamental rift between the owners and the managers. First, the institutions of modern capita-

<sup>21</sup> New York: John Day Co., Inc., 1941

<sup>22</sup> *Ibid.*, p. 79.

lism, permitting owners with no managerial obligations to obtain the income from their property *in absentia*, deprived the managers of the financial rewards the latter might regard as in keeping with their responsibilities. Further, the owners had the legal power to prevent the managers from organizing production along efficient, coordinated lines throughout the economy, and they would use this power whenever reorganization threatened to diminish individual owners' profits.

Although Burnham expressed personal distaste for managerial society, which he predicted would first go through a totalitarian phase and then develop into a limited sort of democracy which could not interfere with central planning and the dominance of the managers, he offered no suggestions for checking the developments he anticipated. To him the whole thing appeared inevitable.

Schumpeter, on the other hand, was a brilliant defender of capitalism and free enterprise. He felt that issues of monopoly and imperfections of market structures, and the current theoretical conceptions of the role of competition, all took a narrow, distorted, and shortsighted view of the economic process and became trivial or meaningless when one looked at the capitalist "engine" as a dynamic force in economic development. The important factor, Schumpeter felt, was innovation over time.

Schumpeter's "vision" of the progressive role of capitalism was most urgently and fluently expressed in his 1942 work, *Capitalism, Socialism, and Democracy*,<sup>23</sup> but his ideas on this subject permeate his earlier works, and their groundwork, at least, can be found in his *The Theory of Economic Development*<sup>24</sup> and his *Business Cycles: A Theoretical, Historical, and Statistical Analysis of the Capitalist Process*.<sup>25</sup>

Economic development<sup>26</sup> is generated by innovations, which Schumpeter defined as follows:

Therefore, we will simply define innovation as the setting up of a new production function. This covers the case of a new commodity,

<sup>23</sup> New York: Harper & Bros., 1942.

<sup>24</sup> Cambridge, Mass.: Harvard University Press, 1934. Trans. from the German by Redvers Opie.

<sup>25</sup> Two vols.; New York: McGraw-Hill Book Co., 1939.

<sup>26</sup> In Schumpeter's words, "By 'development,' therefore, we shall understand only such changes in economic life as are not forced upon it from without but arise by its own initiative, from within" (*The Theory of Economic Development*, p. 63).



as well as those of a new form of organization such as a merger, or the opening up of new markets, and so on.<sup>27</sup>

The entrepreneur, as Schumpeter defined him, was the man who innovated, or who directed production into new channels. Occasionally the impulses for innovation might come from other sources within the economic system, such as strong consumer demand for change in some particular area, but such cases were rare. Most innovations were originated by entrepreneurs who had the vision, the inspiration, and the will and courage to transform an idea into an economic reality. Thus, although an entrepreneur might also be an inventor or a capitalist, the entrepreneurial function was a separate and distinct thing. Often, the entrepreneur was motivated by other considerations than the hedonistic rationalism that served as an explanation for most economic activity. For Schumpeter, these other motives were of transcendent importance: namely, "the dream and the will to found a private kingdom," "the will to conquer: the impulse to fight, to prove oneself superior to others, to succeed for the sake, not of the fruits of success, but of success itself," and finally, "the joy of creating, of getting things done, or simply of exercising one's energy and ingenuity."<sup>28</sup>

There are two points in the Schumpeterian scheme of development which are of particular importance to our present problem of concentration and public policy and thus warrant extended attention. First, Schumpeter argues that large-scale free-enterprise capitalism has provided an excellent environment for innovation and economic progress. Secondly, Schumpeter treats the merger as one form of innovation in his sense of the word.

In regard to the first point, Schumpeter contended that, in order to assess an economic system, one had to look at its record over time. In such an assessment capitalism had performed and is performing brilliantly. Capitalism must be envisaged "in its role in the perennial gale of creative destruction."<sup>29</sup> Economists had to emancipate themselves from the old concepts of price and market. Although economists had focused their attention on price competition within a framework of given market structures and methods of production, neither price competition nor competition in quality

<sup>27</sup> *Business Cycles*, p. 87.

<sup>28</sup> *The Theory of Economic Development*, p. 93.

<sup>29</sup> *Capitalism, Socialism, and Democracy*, p. 84.

and sales promotion within a set framework were of particular social importance. The competition that counts, according to Schumpeter, is "competition from the new commodity, the new technology, the new source of supply, the new type of organization (the largest-scale unit of control for instance)."<sup>30</sup> Such competition strikes not at profits alone, but at firms' very existence.

A capitalistic system in which large firms continually maneuvered for long-run market positions and competed with one another by the introduction of new products and processes would, over time, prove superior to a system of pure and perfect competition. Monopoly was not too much to be feared, as no firm could insulate its market against the onslaught of new, substitute commodities unless it kept its prices at reasonable levels and developed new or improved products itself. A static monopoly would be swept away in the "gale of creative destruction," and, in the process, the whole economy would progress.

Schumpeter recognized that, with imperfections of competition and external changes, there would at most times be unemployment in a capitalist society.<sup>31</sup> But, unlike Keynes, he did not consider this to be a very serious problem. In the United States, at least, he felt that the society had become wealthy enough to take adequate care of the unemployed; and, "the real tragedy is not unemployment *per se*, but unemployment plus the impossibility of providing adequately for the *unemployed without impairing the conditions for further economic development*."<sup>32</sup>

In his historical studies in *Business Cycles*, Schumpeter referred in several contexts to his concept of the merger as innovation. He does not, however, treat the idea anywhere in a fully integrated fashion.<sup>33</sup> In reviewing the merger movement of 1898 to 1907, for example, Schumpeter suggests that the merger may simply be designed to combine several plants so that an already existent product may be produced more cheaply. In the case of railroad mergers, Schumpeter notes that the giant systems formed during this decade could not have hoped to exploit any monopolistic positions they might have attained. The motive, Schumpeter be-

<sup>30</sup> *Loc. cit.*

<sup>31</sup> *Business Cycles*, p. 161.

<sup>32</sup> *Capitalism, Socialism, and Democracy*, p. 70. Italics as in original.

<sup>33</sup> The treatment of changes in business organization and commercial combinations as innovations is also mentioned in *The Theory of Economic Development*, p. 133.

lieved, was to increase profits through building systems which could be operated with maximum efficiency.

Somewhat later, however, in discussing the electric power industry during the period 1919-1929, he suggests that mergers may be an inevitable result of technological change necessary to effectuate the innovations in product which technological improvements have made possible. He argues that a great reduction in the number of automobile producers was necessary to achieve efficiency and subsequent advance in that industry; and he discusses concentration of control and research in the chemical industry as a factor favorable to the development of new products.

At first sight, therefore, there appears to be some confusion in Schumpeter's treatment of the role of mergers as innovation. The motive behind most of the mergers which occurred about the turn of the century was to increase profits either through operating economies or through control of supply.<sup>34</sup> It is reasonable to assume that Schumpeter was generalizing only for this period in treating the typical merger as limited to changing the production function for a given product. Later, in discussing the 1920's, he drops this restrictive treatment. Schumpeter, then, has described two periods of widespread merger activity and, in the process, has suggested two ways in which mergers may serve as innovations: first, by changing the productive process for an existing commodity or service, and secondly, by creating a new industrial organization in which new commodities or services can be put into production.

Schumpeter's opinion on the quantitative importance of the role of mergers in economic development is more clearly expressed than is his description of the process by which mergers contribute to development. Thus, in speaking of the 1898-1913 Kondratieff upswing, he writes, "The productive capacity that was thus created and could not have been created without them [mergers] ranks high on the list of the factors that explain the torrent of products that broke forth in the postwar part of the downgrade."<sup>35</sup>

<sup>34</sup> For evidence on the motivations of the early trusts see testimony in U. S. Industrial Commission, *Preliminary Report on Trusts and Industrial Combinations*, Vol. I.

<sup>35</sup> *Business Cycles*, p. 404. Schumpeter qualifies his praise with a recognition of the financial disturbances created by these mergers and of their cyclical repercussions.



Schumpeter argued that profits gained through the use of monopolistic power to restrict production and raise price serve a socially useful function in stimulating innovation. In *Capitalism, Socialism, and Democracy*,<sup>36</sup> he suggested that some long-range investment might be undertaken only if the entrepreneur could to some extent insure himself against loss. The profits gained through monopoly power might be treated simply as insurance payments made by the consumers. Further, he regarded the large, innovative firms as aggressively competitive, and therefore he felt that profits gained through restrictions were necessary as protection against the attacks of other large competitors. In *The Theory of Economic Development*,<sup>37</sup> Schumpeter noted that the profits of previous innovations could often be used to acquire the resources necessary for further innovation. Thus, although Schumpeter never stated the relation, a logical connection between innovation through merger and later innovation in the form of new productive processes or products can be made within his framework: even if a merger serves no other purpose than giving the firm additional power to restrict production, the profits might be a necessary stimulus to later, socially beneficial product or cost-saving innovations.

Far from regarding partial equilibrium theory as fallacious, Schumpeter observed, in anticipation of J. M. Clark's "Toward a Concept of Workable Competition," that the results of monopolistic competition may be negligible in the long run as a result of highly elastic long-run demand curves facing large firms.<sup>38</sup>

Basically, Schumpeter's conclusions differ so widely from those of Burnham because the two men had opposed views of the forces which underlie and sustain competitive capitalism. For Burnham, a group of professional managers are in control of industry and are the present-day ruling class; while Schumpeter envisaged the innovators or entrepreneurs who put new ideas and techniques into operation as the important and vital figures. Burnham, in the Marxian tradition, predicted managerial society as the outcome of a class struggle; in his dialectic, the managers rather than the proletariat would triumph. Schumpeter, on the other hand, noted

<sup>36</sup> Pp. 87-91.

<sup>37</sup> P. 136.

<sup>38</sup> *Business Cycles*, p. 65. In referring to Robinson and Chamberlin, Schumpeter commented, "Their theory has been one of the major contributions to postwar economics" (*Capitalism, Socialism, and Democracy*, p. 79).

that his innovating entrepreneur could be a manager, a capitalist, a promoter, or an inventor; and he suggested that entrepreneurial behavior transcended any class function.

Further, Burnham's reasoning was Marxian in describing history as a conflict of class interests. Schumpeter's writing lies within the framework of partial-equilibrium economics in treating competition among members of the same economic classes as the essential phenomenon, although his description of the competitive process is unique.

Thus, the first step in testing the validity of either Burnham's or Schumpeter's work would be to question the relevance of the underlying assumptions. Both Burnham's manager and Schumpeter's entrepreneur are abstractions; and it would have to be determined which of these more closely typifies the dominant figures in American business today, as well as whether the prevailing force is competition or class struggle. Depicting the separation of ownership and control was not enough. A comparison of Burnham's and Schumpeter's works, as well as those of Knight and Gordon on profits, demonstrates the necessity of further investigation of the nature and objectives of the controlling elements in the modern corporation.

### *C. Competition and the Level of Employment*

Although J. M. Keynes had, in his *General Theory*, shown little or no concern over industrial concentration, subsequent writers who accepted his analysis of an aggregate equilibrium position with less than full employment or who worked with similar concepts did suggest that monopolistic rigidities might contribute to the difficulties of achieving full employment in a modern, industrial, private-enterprise economy. The most notable work along this line was *Full Recovery or Stagnation?* by Alvin H. Hansen.<sup>39</sup>

In the Keynesian system, the equilibrium level of production and employment for an economy is reached when planned savings are equal to planned investment. There is no guarantee that such an equilibrium will be one at which there is a satisfactory level of employment. Hansen presumed that, in a modern and wealthy economy, the general equilibrium position would, more likely than

<sup>39</sup> New York: W. W. Norton & Co., 1938.

not, be one considerably below that of full employment. Hansen, citing the work of R. F. Harrod,<sup>40</sup> noted that consumption must continue to increase in order to provide constant activity in the investment goods industries and that if consumption even levels off, real national income, employment, and eventually consumption itself must fall.<sup>41</sup> He felt that consumption, in a wealthy economy, would not be maintained at the necessary rate of increase without continuing artificial stimuli such as income-generating expenditures by government.

Savings, in a mature economy, would be large. The alternative to achieving full employment through increasing consumption expenditures is, obviously, to stimulate investment to the point where it can continue to absorb the savings which would be made at full-employment levels of income. Hansen was pessimistic as to this possibility. He noted that, in the past, the introduction of power-driven machinery, railroad construction, and, more recently, the development of the automobile and attendant highway construction programs had all absorbed large amounts of capital. Hansen saw no such technological change of fundamental magnitude on the horizon of the late 1930's. Further, the stimuli of population growth and the opening up of new territories, which had been of great importance in the nineteenth century, had faded to insignificance. Finally, technology in the twentieth century promised to be capital-saving rather than capital-intensive so that the problem of finding investment outlets for full-employment savings would be heightened. Thus, Hansen envisaged "secular stagnation" with continuing unemployment, albeit a rising standard of living, as a primary problem for the modern United States.<sup>42</sup>

<sup>40</sup> R. F. Harrod, *The Trade Cycle: An Essay* (Oxford: Clarendon Press, 1936).

<sup>41</sup> This is the well-known theorem of the accelerator, utilized by Harrod in his model of the trade cycle. As most often formulated, the accelerator treats induced investment as a function of change in consumption alone, so that a fall in induced investment may be brought about by a reduction in the rate of increase in consumption. It is not necessary for consumption actually to level off.

<sup>42</sup> For critical evaluations of Hansen's assumptions and more optimistic views towards the prospects of the American economy, see the following: E. D. Domar, "Expansion and Employment," *American Economic Review*, XXXVII, no. 1 (March, 1947), 34-55; A. W. Sametz, "Secular Stagnation in a Maturing Economy," unpublished Ph.D. dissertation, Princeton University, 1951; G. Terborgh, "Capitalism and Innovation," Papers and Proceedings of the Sixty-second Annual Meeting of the American Economic Association, *American Economic Review*, XL, no. 2 (May, 1950), 118-123; H. L. Towle, "Economic Maturity: An Industrial View," *Journal of Business of the University of Chicago*, XIX (Oct., 1946), 224-231.



Business concentration with resulting monopolistic restrictions and rigidities heightened the problem. On several occasions Hansen alluded to these factors, but he did not make it clear just how significant he thought them to be. Concentration, certainly, was not regarded as so serious a barrier to full employment in the economy as the more fundamental aspects of a high propensity to save relative to investment outlets.

Yet concentration could affect savings and investment. Hansen regarded Harrod's introduction of diminishing elasticity of demand into his model as the single new and most valuable aspect of Harrod's work. Harrod assumed that, as incomes increase during the upswing of the business cycle, people become less sensitive to price differences. Thus, advertising and other forms of product differentiation become more important relative to price competition. Further, as demand becomes less elastic, output restriction becomes more profitable. Both the degree of imperfection of competition and the profitability of output restriction increase as the boom continues. Diminishing elasticity of demand becomes a force tending to end the boom and precipitate a downswing. Hansen praised Harrod for this explicit introduction of monopolistic factors and noted that advertising did, in fact, increase in times of prosperity. Further, he observed, outright monopolistic combinations were typically the products of depressed periods.<sup>43</sup>

There seem to be difficulties with the Harrod-Hansen analysis. Although restrictions of production might tend to bring the boom to an end, increased selling expenditures might serve to further the expansion. They would, no doubt, be designed to increase demand as well as to influence its elasticity and might, conceivably, increase the propensity to consume. Also, advertising activity, in and of itself, would generate income. Hansen did not discuss the converse phenomenon that, if elasticity of demand increases during the downswing, recovery should be hastened.

<sup>43</sup> This observation is of doubtful validity. The recognized merger waves do not coincide with periods of depression. See, for example, J. W. Markham, "Survey of the Evidence and Findings on Mergers," National Bureau of Economic Research, Incorporated, Special Conference Series, *Business Concentration and Price Policy* (Princeton: Princeton University Press, 1955), especially pp. 146-154. Markham finds that there is only a slight correlation between merger cycles and general cycles of business activity, but that mergers tend to coincide more with prosperity than with depression. Possibly, mergers which came to fruition in times of prosperity had their genesis in initial proposals made during periods of depression.

Hansen also felt that price rigidities caused difficulties in attaining full employment. Thus, in examining and criticizing F. A. von Hayek's proposal in *Prices and Production*<sup>44</sup> for a "neutral" money supply, Hansen commented that neutral money advocates assumed rapid adjustment of prices to reduced costs, whereas, in fact, monopolistic influence maintained prices at close to their former levels and caused a readjustment of the composition of national income in favor of profits and against wage income. Somewhat later, he argued that credit expansion was essential in a boom period as it gave flexibility to an otherwise rigid system. Competitive capitalism, Hansen suggested, continually tended to close the gap between cost and price without which it could not survive; and escape was sought through the monopolistic restrictions of production which resulted in unemployment. "Technical innovations," he wrote, "aided by bank credit expansion, alone appear capable of loosening up the joints and releasing a fresh flow of invigorating blood throughout the economic organization."<sup>45</sup> Price rigidities impeded recovery, Hansen noted, by blocking the shift of resources into areas of scarcity and hence contributing to "bottlenecks" during the expansion period.

However, Hansen was more concerned with the effects of monopolistic structures on stagnation than with their role in various phases of a given cycle. His main indictment seems to be that monopolistic rigidities add to the difficulties of creating enough investment opportunities to absorb full-employment savings. A most important aspect of the failure of investment to reach high enough levels, Hansen felt, was a tendency for costs to rise to prohibitive levels. The undue height of costs, he stated, could be attributed to governmental policies, corporate price policies, and labor policies. Corporate high-price policies were attributable to "so-called fair-trade regulations and neo-monopolistic practices."<sup>46</sup> These high price policies were most unfortunate as they had arisen at a time when extensive investment outlets created by the expansion of frontiers and population growth were closing and when intensive investment was essential to the maintenance of full employment.

<sup>44</sup> London: G. Routledge & Sons, Ltd., 1935.

<sup>45</sup> *Op. cit.*, p. 114.

<sup>46</sup> *Ibid.*, p. 287.

Further, if technological development were such that innovations were capital-saving, labor-saving, or both, only a flexible price policy, Hansen felt, could bring about the necessary widening of capital. He concluded:

Above all it is of the utmost importance to break through the frozen structure of administered prices and preferential intercorporate reciprocity (so inimical to price competition) in order that technical progress may have free play to tap an ever-widening circle of consumer demand, and thereby enable us to maintain a workable economy.<sup>47</sup>

We need not be concerned here with the underlying features of the secular stagnation argument, as a review of examinations into the propensity to consume of the modern United States and the availability of investment outlets would take us far afield. Yet the effects of business concentration, as noted by Hansen, are of importance. Traditionally, competition has been valued as a mechanism for achieving optimum allocation of resources, and monopolistic elements in the economy have been studied in the light of their effect on efficient allocation. However, in a period of widespread unemployment, whether cyclical or secular, wasteful allocation is an almost trivial deficiency compared with the failure to utilize large portions of available resources and labor in any way. The question of whether business concentration and monopolistic practices accentuate this failure was a crucial one during the 1930's. Hansen's discussion did not answer this question.

Hansen's suggestion that restriction of production increases during the boom as demand grows more inelastic seems oversimplified. The major problem here is not the aggregate degree of restriction, for there is no rigorous demonstration that a "world of monopolies" will not function as well as an imperfectly competitive economy.<sup>48</sup> The difficulty lies in varying degrees of restriction throughout different sectors of the economy. We would expect to find underutilization of resources in the monopolized sectors relative to the competitive sectors; and as the economy moved through various phases of the business cycle or simply grew, rigidities in

<sup>47</sup> *Ibid.*, p. 328.

<sup>48</sup> See Joan Robinson, *op. cit.*, chap. xxvii, "A World of Monopolies," pp. 307-326. Mrs. Robinson suggests that, barring collusion among the monopolists, the allocation of resources might be improved in a world of monopolies over that of an imperfectly competitive economy, but at the cost of greater inequality of income distribution.



the monopolized sectors and price flexibility in the competitive sectors might increase distortions until full utilization of resources became impossible. Even when the concern is with macro-economic problems of employment and production, the approach to allocation and price rigidities must be by sectors.

In Hansen's analysis, monopolistic competition, characterized by product differentiation, increases during the boom and outright monopoly increases during the depression. Thus, at both phases, business concentration acts as a force operating to depress the level of economic activity through restriction of production. Further, restrictive practices in an economy of changing productive techniques and price levels will tend to shift relative shares of the national income from recipients of wages to recipients of profits. Both of these features were stressed in the Temporary National Economic Committee's investigation of the American economy, and are reviewed below. Briefly, T. N. E. C. investigators showed that fluctuations in both price and output varied more with durability of product than with the degree of concentration of the industry; and a study of the role of big business in depressing the level of economic activity showed only that the corporate sector of the economy generated more savings than it could itself absorb in investment.

Under Hansen's assumptions as to monopolistic competition in the boom and combination in the depression, concentration should be increasing over time. At the time Hansen wrote, when *The Modern Corporation and Private Property* by Berle and Means was the most widely accepted investigation of this phenomenon, these assumptions were in accord with empirical evidence. However, more recent work, to be reviewed below, casts serious doubt on the reality of increasing concentration.

#### *D. The Temporary National Economic Committee*

Following the First World War, public interest in problems of business concentration and public policy waned as the interest of economists waxed. Not until the 1930's did periods of great professional and public interest coincide for the first time.

In April, 1938, President Roosevelt sent a message to Congress in which he cited the growing concentration of economic power in the United States and the decline of competition. The President

recommended, "To meet the situation I have described, there should be a thorough study of the concentration of economic power in American industry and the effect of that concentration upon the decline of competition."<sup>49</sup>

In June, 1938, acting by joint resolution on the President's message, Congress established the Temporary National Economic Committee, consisting of three members each from the Senate and House and one representative each from the Departments of Justice, Treasury, Labor, and Commerce and from the Securities and Exchange Commission and the Federal Trade Commission. The Committee was instructed "to make a full and complete study and investigation" of the matters referred to by the President. Before the Committee's *Final Report and Recommendations* was submitted in March, 1941, a total of \$1,070,000 had been appropriated for the investigation.<sup>50</sup>

The formation of this Committee culminated a decade of growing hostility to big business, and the Committee reflected a suspicion that concentration was, in part at least, responsible for the depression of the decade. Following the works of Chamberlin, Robinson, Berle and Means, and Burns, current economic opinion was also predominantly hostile to the monopolistic influences it regarded as pervading the structure of industry. Thus, not only was the subject of mutual interest to legislators and students, but their attitudes were sympathetic to each other. It is not surprising, therefore, that economic assistance was called upon by the T. N. E. C. to an extent unknown in the past, and that economists responded generously to the call.

The T. N. E. C. heard 552 witnesses, was in session for about 775 hours during an eighteen-month period, and published over 20,000 pages of testimony and 3,300 technical exhibits.<sup>51</sup> In addition, it sponsored 43 monographs on research topics of interest to the Committee. A study of a number of these monographs is of importance in reflecting the opinions and attitudes of many prominent specialists in the problems of concentration.

<sup>49</sup> U. S. Temporary National Economic Committee, *Investigation of Concentration of Economic Power* (hereinafter referred to as T. N. E. C.), *Final Report and Recommendations of the Temporary National Economic Committee* (Washington: Government Printing Office, 1941), p. 16.

<sup>50</sup> *Ibid.*, pp. 692, 730.

<sup>51</sup> *Ibid.*, p. 696.

As the monographs were written with the co-operation of the participating Federal agencies, a wealth of statistical information was made available to the authors and was presented in the monographs. There were numerous presentations of data showing such information as concentration ratios in various industries, aggregated figures from corporate financial statements, the size distribution of business firms, production and employment records through the 1920's and 1930's, the value and distribution of corporate profits, and price movements in various industries. These data were put into perspective by a further wealth of statistics on national income, employment, price levels, and total production. However, very little effort was made to use these statistics in quantitative application of economic theory, and most of what was done in this direction was a utilization of income data to illustrate problems of full employment within a Keynesian framework.

With the exception of a study by Clair Wilcox,<sup>52</sup> no effort was made in the monographs to set forth prevailing economic thought on price determination in various market structures and their effects on production and distribution. Wilcox gave a brief and clear exposition of various market categories recognized in price theory, despite a barrage of terms such as "oligopsony" and "duopsony" and his somewhat pedantic distinctions between pure and perfect competition and between imperfect and monopolistic competition. He discussed the advantages, including technological progress under pressure as well as optimum allocation, which should flow from competition; and he enumerated the disadvantages of monopoly. He reviewed some of the disadvantages of competition, especially in depressing working conditions, exploiting natural resources, and in wasteful duplications and selling expenditures. In all, Wilcox gave the T. N. E. C. a brief, summary, textbook type of treatment of current economic bases for the study of competition and monopoly.

Wilcox then went on to analyze existing markets in the United States. He stated that it was impossible to categorize actual markets in economic terms. "Competitive industries," he noted, "have their monopolistic aspects; monopolized industries have their competitive aspects. The situation in both fields is constantly in a state of

<sup>52</sup> T. N. E. C. Monograph no. 21, *Competition and Monopoly in American Industry* (1940).



flux.”<sup>53</sup> He further commented on the inadequacy of existing statistical techniques. He noted that size need not be equated with monopolistic power, that the absence of profits did not necessarily indicate the absence of monopolistic power, and that a developing technology led to the frequent existence of potential competition. Although Wilcox did not try to categorize the actual markets he dealt with, his discussion was consistent with the classifying framework he described.

Many of the scholars who wrote the T. N. E. C. monographs evinced a lack of faith in the competitive process.<sup>54</sup> Thus, Walton Hamilton and Irene Till, pointing out that the Sherman Act was designed to supplement laissez-faire market rule, observed, “As the efficiency of market control was lost—or as its shortcomings became manifest—the need of positive controls became apparent.”<sup>55</sup> M. E. Dimock and H. K. Hyde commented that “managers, rather than consumers acting through the market, have assumed control over prices and obviated competition in a large sector of our economy.”<sup>56</sup> Milton Handler, in commenting on antitrust policies, stated his belief that there were many areas in the economy where competition could not be restored and in which government regulation was necessary.<sup>57</sup>

Further, some of the writers questioned the usefulness of economic analysis in dealing with problems of public policy towards monopoly. Hamilton and Till, for example, raised the question of what the Department of Justice could be expected to do if it were given greater discretion in establishing and enforcing an antitrust policy. Would it seek to encourage technological advance and the elimination of inefficient producers within a dynamic economy, or would it conceive of its duty as the promotion of security and the protection of small firms? Economists, they felt, would be of little help in this sort of a problem.<sup>58</sup>

<sup>53</sup> *Ibid.*, p. 308.

<sup>54</sup> This did not hold true for the Committee members. See David Lynch, *The Concentration of Economic Power* (New York: Columbia University Press, 1946), especially p. 109.

<sup>55</sup> T. N. E. C. Monograph no. 16, *Antitrust in Action* (1940), p. 116.

<sup>56</sup> T. N. E. C. Monograph no. 11, *Bureaucracy and Trusteeship in Large Corporations* (1940), p. 118.

<sup>57</sup> T. N. E. C. Monograph no. 38, *A Study of the Construction and Enforcement of the Federal Antitrust Laws* (1941), pp. 99-100.

<sup>58</sup> T. N. E. C. Monograph no. 16, p. 113.

The two areas stressed most frequently in the monographs and in the hearings were the relationship of big business to technological progress and the responsibility of big business for the depression. In one case, that of displacement of workers by technological advance, these two areas clearly overlapped.

One monograph, by L. L. Lorwin, J. M. Blair, and Ruth Aull, analyzed technology in the American economy;<sup>59</sup> and over 1300 pages of testimony in the hearings were devoted to "Technology and the Concentration of Economic Power."<sup>60</sup> Most of the concern in both Monograph no. 22 and the hearings was with the problem of labor displacement. The hearings on technology were prefaced by statements both by Senator J. C. O'Mahoney, the chairman, and the economic adviser to the Committee, Theodore J. Kreps, to the effect that technological advance was laudable and to be encouraged; and among the earliest of the witnesses to testify was Watson Davis, the director of Science Service, who described with enthusiasm the enormous potential for a higher living standard embodied in scientific advance. The chairman was careful to elicit a clear statement from every witness whose testimony was unclear on the point that he was not opposed to technological change per se. Yet the hearings as a whole stand as an indictment, both by witnesses and members of the Committee, of rapid unplanned technological advance and the dislocations created thereby. The authors of Monograph no. 22 simply avoided a clear statement of their position in this respect and confined themselves to a study of the social problems created by technological improvements, although the general tenor of their discussion indicates that they were far from opposed to progress.

In summarizing the hearings, Dr. Isador Lubin, of the Department of Labor and a member of the Committee, commented that the entire burden of technological progress had been borne by the displaced laborer; and he noted, "I think one thing is evident, as shown by the testimony before this committee, that everyone is agreed the displaced worker should not bear the cost." It is perhaps significant that the chairman felt it necessary to observe to the Committee that "the displaced worker doesn't make up all of the unemployed. . . ."<sup>61</sup>

<sup>59</sup> T. N. E. C. Monograph no. 22, *Technology in Our Economy* (1941).

<sup>60</sup> T. N. E. C., *Hearings, Part 30* (1940).

<sup>61</sup> *Ibid.*, pp. 17258, 17257.

The authors of Monograph no. 22 presented a great deal of statistical data on changes in labor productivity and employment, but they did not attempt to estimate quantitatively the degree to which technological unemployment was responsible for the depression.

Both the hearings and the monograph indicated that technological advance had promoted business concentration and, conversely, that the existence of monopolistic elements in the economy heightened the problem of technological displacement. In regard to the first point, Kreps testified during the hearings that modern technology, "in the typical instance," required aggregates of capital which made necessary the development of corporations that could utilize "the savings and efforts of hundreds of thousands of people."<sup>62</sup>

A table showing concentration in manufacturing in 1937 was presented in the monograph, followed by the comment, "Technology is undoubtedly one of the primary causes of this concentration."<sup>63</sup> This point was substantiated only by reference to the operating efficiency of large units which had been strengthened by technology, the necessity for group research in large industrial laboratories which gave a further advantage to large firms, and the use of patents to maintain or increase industrial power.

In addition to the conclusion that technology had fostered concentration and monopoly, Monograph no. 22 indicated that the existence of monopoly had heightened the problems of adjustment to technological change. The authors described three basic compensatory forces through which the economy adjusted itself to technological change. These were a reduction in hours worked without a corresponding reduction in wages, the development of new industries, and reduction of prices. Working hours had fallen rapidly in preceding decades, the authors found, and there was, at the time of writing, little prospect of their falling further as an offset to unemployment. Little could be predicted about the rise of new industries; but the authors were pessimistic on this score, particularly on the grounds that trends indicated a capital-saving rather than capital-intensive development in technology, and that, given the income distribution in the United States, any new mass-production industry would probably replace an existing industry. Thus, the burden fell on price reduction. The authors cited a study

<sup>62</sup> *Ibid.*, p. 16256.

<sup>63</sup> T. N. E. C. Monograph no. 22, p. 196.



of the relative declines of unit labor requirements and price in concentrated and non-concentrated industries showing that unit labor requirements had fallen further than price in concentrated industries during the preceding two decades and that the reverse was true for the non-concentrated industries. They concluded that, because the concentrated industries did not reduce prices in order to increase production, these industries had failed to compensate for the unemployment arising from declining labor requirements per unit of product.

The relationship of technology to economic concentration was investigated or touched upon in several other T. N. E. C. monographs. One study, by Walton Hamilton and others,<sup>64</sup> was devoted to the influence of the patent system on concentration. Hamilton found that the original purpose of the patent grant, to stimulate discovery in the useful arts, had all but been obscured by the use of the patent as a weapon to attack competitors and to hedge in and protect monopoly positions. The situation was made worse, according to Hamilton, by the fact that patent litigation was exceptionally slow and costly, and that therefore the size of the corporate treasury was of more importance than the validity of the claims in a patent suit. He cited several cases of monopolistic positions built on or fostered by patent protection. He charged that much of corporate research was designed to perpetuate patent monopolies or to acquire unused patents that could prevent competitors from entering the field. Rather than foster technological advance, this type of research hindered it. In another monograph, Myron Watkins came to similar conclusions as to the role of patents and industrial research laboratories.<sup>65</sup>

Somewhat different conclusions as to the role of research in the competitive structure were reached in two other monographs. In a discussion of non-price competition, Saul Nelson and W. G. Keim argued that emphasis on quality had fostered industrial research which had led to greatly improved products.<sup>66</sup> This they considered as a vehicle other than price reduction by which the forces of competition passed benefits along to consumers.

<sup>64</sup> T. N. E. C. Monograph no. 31, *Patents and Free Enterprise* (1941).

<sup>65</sup> T. N. E. C. Monograph no. 13, *Relative Efficiency of Large, Medium-sized, and Small Business* (1941), pp. 137-138.

<sup>66</sup> T. N. E. C. Monograph no. 1, *Price Behavior and Business Policy* (1940), p. 56.

W. L. Thorp and W. F. Crowder, in discussing giant, multi-product enterprises, stated that industrial research was leading to product diversification which, in many cases, increased competition in existing markets either through the introduction of a substitute or through the entry of a newcomer, originating in another industry, with an improved process of production.<sup>67</sup>

If it is fair to say that the T. N. E. C. studies gave a reasonably accurate reflection of current economic thought on technology and big business, then the importance and timeliness of Schumpeter's *Capitalism, Socialism, and Democracy* becomes evident. Although the benefits of technological progress were noted, and although Thorp and Crowder and Nelson and Keim suggested that the research activities of giant firms might lead to improved products and greater competition, the over-all impression from the T. N. E. C. monographs and hearings is that big business both retards technological progress by use of patent devices and accentuates the problems connected with adjustment to it because of price rigidities. Nowhere is there any indication that there might be a necessity for the stimulation or encouragement of research activities, or that the problem was anything other than that of effectively utilizing a stream of inventiveness whose source was not investigated but whose continued abundance was presumed unless it was choked off by monopoly.<sup>68</sup>

The T. N. E. C. further investigated the relationship between business concentration and economic fluctuations, particularly the responsibility of big business for the depression of the 1930's. Two major indictments other than technological displacement were examined: first, that corporate concentration was responsible for personal income disparities that promoted depression, and second, already touched upon above, that monopolistic price rigidities accentuated the downswing in production and employment and retarded recovery.

The first point was the central theme of a monograph by Martin Taitel.<sup>69</sup> Taitel argued that the corporate system, through profits

<sup>67</sup> T. N. E. C. Monograph no. 27, *The Structure of Industry* (1941), pp. 669-671.

<sup>68</sup> For a concise summary of the T. N. E. C.'s findings on technology, see *Final Report of the Executive Secretary* (1941), pp. 105-142.

<sup>69</sup> T. N. E. C. Monograph no. 12, *Profits, Productive Activities and New Investment* (1941).

and dividends, generated a large volume of savings, both corporate and individual, and itself absorbed but a part of this amount in investment. The excess savings, Taitel noted, had to be absorbed in other areas of the economy in order to prevent an adjustment through a fall in the national income. The major difficulty, to Taitel's mind, was that dividends were, in the main, paid to individuals with high incomes and were therefore to a large extent saved. The income distribution of the economy, and the corporate sector's ability to make a large portion of its investment expenditures out of its own savings while creating excessive individual savings, were permanent drags on the economy, according to Taitel. He concluded that the economy had never experienced a period of full utilization of resources except when factors such as a large favorable balance of foreign trade or an increase in the money supply had been operative. "Thus," he noted, "it appears that so long as a high degree of concentration of income and wealth exists, a full use of resources may not be attained let alone maintained for any long period."<sup>70</sup> Taitel utilized Bureau of Internal Revenue data to demonstrate the amounts of corporate profits, investment, and dividend payments and to illustrate the large proportion of dividends accruing to high income groups. He did not, however, seek to identify the non-corporate sectors of the economy which might absorb the savings generated by the corporate sector, nor did he make any examination of their ability to do so.

T. N. E. C. findings as to monopolistic price rigidities are conflicting. Dimock and Hyde, after expressing their opinion that the market no longer regulated prices and production, observed that business administrators had a social responsibility to see to it that production and employment were kept at high levels and "that undue rigidity does not accentuate and prolong depressions."<sup>71</sup> In the *Final Report of the Executive Secretary*, Dewey Anderson made note of "the serious disparities between freely competitive and managed areas of the economy"<sup>72</sup> in the matter of price flexibility. This was illustrated in the *Report* by an allusion to the plight of the farmer, who found that the prices of commodities that he sold from 1929 to 1933 had fallen far more than those of commodities that

<sup>70</sup> *Ibid.*, p. 134.

<sup>71</sup> T. N. E. C. Monograph no. 11, p. 18.

<sup>72</sup> *Op. cit.*, p. 79.



he bought. The *Report* also suggested that investment might be retarded by monopolistic or restrictive rigidities in the prices of investment goods. Yet the one detailed statistical study of price and production fluctuations made by the T. N. E. C. did not bear out these charges. Following an analysis of price and production shifts from 1929 to 1933 in 1807 products, Thorp and Crowder concluded:

From the material presented in this chapter and over the complete list of products, there appeared to be no strongly marked relation between the conditions of concentration under which products were produced and their quantity and price behavior; high and low concentration and large and small changes in price and quantity appeared together almost as if by chance. And further, different quantity behavior tended to be associated more directly with some particular economic characteristic of the product than with the amplitude of price changes.<sup>73</sup>

In summary, the economists working with T. N. E. C. put only minor emphasis on the product-market effects of monopoly and restrictions and devoted much attention to the role of big business in the depression of the period. Although the prevailing attitude was strongly hostile to big business, the indictments made were weak and were unsubstantiated by the voluminous statistical material presented. Out of the studies on technology, there came recommendations for patent reform,<sup>74</sup> but in other areas there was simply confusion as to whether technological advance promoted monopoly or competition and as to whether large-scale business and monopoly promoted or hindered research and invention. No efforts were made to analyze the sources of technical advance, other than to cite the large capital requirements of modern industry. Research and development were not distinguished. Similarly, in regard to the role of big business in the depression, Taitel, while ignoring what took place in the rest of the economy, felt that he had condemned corporate activity and personal income concentration by demonstrating that the corporate sector did not make investments equal to the savings that it generated. The fact that Thorp and Crowder had found little difference in the price and production changes of concentrated and non-concentrated industries from a year of prosperity to a year of depression did not prevent

<sup>73</sup> T. N. E. C. Monograph no. 27, p. 402. The authors measured only amplitude of change over the period, not frequency.

<sup>74</sup> See *Final Report and Recommendations of the Temporary National Economic Committee*, pp. 36-37.

others from attacking big business rather indiscriminately on grounds of price rigidity. At one point, in the *Final Report of the Executive Secretary*, the author appears to have become so enchanted by the word "concentration" that he fails to distinguish between concentration of personal wealth and income and concentration of corporate activity:

Not only does an increase in concentration raise the volume of capital expenditures required to prevent declines in activity but it also lowers the outlets for such expenditures. This latter is a consequence of the fact that concentration limits the extent to which capital expenditures will be made for capital goods to take business away from existing facilities.<sup>75</sup>

It seems evident that behind this statement lies the assumption that the volume of capital expenditures must increase to offset a rising marginal propensity to save as the concentration of *individual* incomes increases, whereas the concentration that limits capital expenditures in order to protect existing investment is the *corporate* concentration of productive facilities.

One monograph attempted to evaluate the social performance of various industries and firms. This monograph, *Measurement of the Social Performance of Business*, by T. J. Kreps, is illustrative of the weaknesses of the T. N. E. C. approach to the role of big business in the modern economy.<sup>76</sup> Kreps, who served as economic adviser to the T. N. E. C., studied trends in six statistical series from 1919 to 1938. These were: employment, production, consumer effort demanded (consumer funds absorbed divided by the general price level), consumer funds absorbed (equated either with "value added by manufacture" from the *Census of Manufactures* or with "income produced" from the National Income Division of the Department of Commerce), payrolls, and dividends and interest. From these six series, seven criteria of social performance were derived. The first was the trend of production, the second was the trend of employment, and the third was the trend of payrolls. In these three cases, the greater the rate of growth, the greater was considered the social performance. The other four criteria were ratios, in all cases being judged favorably if they rose over time. These were: the ratio of the employment index to the production index, the ratio

<sup>75</sup> *Op. cit.*, p. 247.

<sup>76</sup> T. N. E. C. Monograph no. 7 (1940).

of production to consumer effort demanded, the ratio of payrolls to consumer funds absorbed, and the ratio of payrolls to dividend and interest payments. In all cases where comparisons were made among industries, firms, or sectors of the economy, the rank number of each unit was listed for each criterion, and these seven rank numbers were simply summed to obtain a composite rank for the unit. No effort was made to assign weights to the criteria.

Several features of this scheme, some of which were commented upon frankly by the author, are of interest. Technological improvement, not only when it displaces workers, but when it causes productivity to rise more rapidly than employment, causes a decline in the measure of social performance of the unit involved. A. T. & T. was ranked the lowest of three large firms compared with each other; and the author observed that, in large part, this result was caused by the introduction of the dial telephone. Increased interest and dividend payments, which appear in only one ratio, and there as a divisor, will always operate to reduce the social rating, regardless of the reason for their increase. Whether changes in production and employment are the result of competition, changes in consumer tastes, or monopolistic restrictions is irrelevant to the rating. The author observed, "Table 1 is not a matter of moral judgement in any sense whatsoever. It shows the facts. Questions of motive or responsibility are completely irrelevant."<sup>77</sup> Yet when Kreps' results indicated that the social performance of all corporations was better than that of all business, he descended from his position of impartiality and cited several reasons why the comparison was invalid. Finally, the equal weighting of all criteria may lead to distortions. Kreps observed that major emphasis should be put on employment, production, and payrolls, and that dividends and interest, which is an item only one-fifth to one-sixth as large as payrolls, should not be stressed. Yet in the composite rankings, Kreps treated all seven criteria equally.

In evaluating employment alone, Kreps made a comparison which completely ignored relative changes in productive processes. By using the employment indexes for individual firms and sectors, he was able to make such observations as the following: had the economy "performed as well" as the baking industry there would have been a shortage of 2,000,000 workers in 1939; whereas had

<sup>77</sup> *Ibid.*, p. 43.



the economy “done as little to employ labor” as A. T. & T., there would have been over 24,000,000 unemployed.<sup>78</sup>

Kreps made no effort at empirical validation of his observation that competitive industries were characterized by “full employment” and “vigorous consumer buying” while concentrated industries were characterized by “idle men” and “idle money.”<sup>79</sup> The depth of his feeling is indicated by the following statement which must be regarded as pure obiter dicta in that he presents no evidence or even further discussion of the idea:

No enterprise society can exist or prosper which does not establish and constantly perfect arrangements and institutions and ideals which make these industrial and financial empires completely subordinate to the inherent resources and capacities of the people. It must prevent exploitation of the people by such corporate bureaucrats intoxicated with their economic power. It cannot let matters take their course. If democracy is to survive it must be vigilant, strong, forceful, and constantly able to defend itself against concentrated economic power. For when the rulers of industrial empires control the state, the inevitable result is fascism and destruction of liberty.<sup>80</sup>

The authors of the monographs had few proposals to offer for improving antitrust policy. Hamilton and Till felt that judicial procedure, in which an industrial issue had to be transformed into a legal case, was inadequate to handle antitrust problems. “The symbol,” they commented, “must replace the actuality.”<sup>81</sup> C. A. Pearce urged that a government agency be given the duty of regulating trade association activities.<sup>82</sup> Milton Handler, in a study of the antitrust laws, concurred with Hamilton and Till as to the unsuitability of judicial procedure and advocated the establishment of an agency which would be empowered to impose restrictions upon an industry, such as regulation of the dissemination of statistics and prohibition of merger, by the administrative rather than judicial process, in order to preserve competition.<sup>83</sup>

The final recommendations of the T. N. E. C. were disappointing. David Lynch, in his study of the hearings, noted that virtually

<sup>78</sup> *Ibid.*, p. 107.

<sup>79</sup> *Ibid.*, p. 115.

<sup>80</sup> *Ibid.*, p. 117.

<sup>81</sup> T. N. E. C. Monograph no. 16, p. 58.

<sup>82</sup> T. N. E. C. Monograph no. 18, *Trade Association Survey* (1941), pp. 354-358.

<sup>83</sup> T. N. E. C. Monograph no. 38, pp. 34-35, 44-45, 88-89.

all of the important questions about the role of monopoly in the American economy were unanswered and that no evaluation was made of the experience gained from fifty years of antitrust enforcement.

Galbraith observed, caustically but accurately:

If, the monographs aside, the investigatory part of the Committee's work was disappointing, it stands as a superb achievement compared with the Committee's interpretation of its findings and its recommendations. The latter will be read avidly but only by the connoisseur of bromides. No serious effort was made to provide an appreciation or *rationale* of large-scale enterprise and concentrated economic power as facts of contemporary life. There was no effort to explain the malbehavior of the economy during the whole of the preceding decade. Indeed, there was no diagnosis of any kind. Rather, with a droll faith in some occult process of democracy, it turned the task over to the American people.<sup>84</sup>

The Committee made much of the threat to democracy posed by big business. In the *Final Report and Recommendations of the Temporary National Economic Committee* there is the statement, "No person who with an open mind reviews the materials gathered by this committee can fail to conclude that the rise of political centralism is the product of economic centralism."<sup>85</sup> This problem had been dealt with in one monograph which surveyed the activities of political pressure groups that had originated in positions of economic power.<sup>86</sup> Yet without any careful discussion of the issue, the T. N. E. C. concluded that business concentration was a prelude to fascism; and this seemed, to the Committee, to be of far more immediate importance than misallocation of resources, restricted production and increased prices, exploitation of the consumer, and other such problems which fell within the realm of the professional economist.

In conclusion, the T. N. E. C. must be regarded as a failure of economic analysis to influence public policy, at the point of its greatest opportunity to do so up to that time. The Committee can hardly be blamed for its failure to organize the spotty material reviewed above into a realistic program of public action.

<sup>84</sup> "Monopoly and the Concentration of Economic Power," pp. 122-123.

<sup>85</sup> *Op. cit.*, p. 5.

<sup>86</sup> T. N. E. C. Monograph no. 26, *Economic Power and Political Pressures*, by D. C. Blaisdell (1941).

### E. *The Role of Competition During the Second World War*

The principle of free competition was analyzed from various angles during the 1930's and early 1940's. Some writers, such as Berle and Means, A. R. Burns, and Burnham, concluded that competition was failing as a social regulator; and Burns, for one, was prepared to advocate abandonment of the principle. Even Schumpeter, a determined supporter of free enterprise, felt the necessity of virtually redefining competition in order to defend the principle. Hansen, following Keynes, proposed a new standard under which the efficacy of competition was to be tested by its contribution to full employment as well as by its allocation of resources. The atmosphere was one of skepticism at best, and, in many cases, disillusion.

Techniques of analysis changed. Profits maximization was no longer a simple concept. Following the work of Robinson, Chamberlin, and Triffin, one could not speak simply of competitive industries and monopolistic industries, but rather one was forced to consider degrees of mutual dependence and cross-elasticities. No clear guides to antitrust policy grew out of the work done by economists during the 1930's, but the issues and problems were put into new perspectives.

The Second World War cast still more doubts on the viability of competition. A problem that faced defense administrators early in the defense period was that of bringing small business into the mobilization effort. For several reasons, the concentration of defense and war orders was virtually inevitable. Much of military production lent itself to large-scale, mass-production methods. Procurement officers preferred to place contracts in familiar channels, and it was administratively simple to deal with only a few suppliers. Civilian administrators shared these attitudes and sometimes magnified them. One government publication noted:

When Knudsen reported for duty in Washington, he told the President that the only thing he remembered from the last war was that "in some cases a ten-cent fellow got a million-dollar job and we didn't get the work." He therefore requested the right to intervene whenever he thought the Services were offering a contract to a firm not big enough to handle it.<sup>87</sup>

<sup>87</sup> U. S. Civilian Production Administration, *Industrial Mobilization for War*:



Following the attack on Pearl Harbor, the United States found itself in immediate and grave peril. Donald Nelson, wartime chief of the Office of Production Management, wrote:

In those days, time was the greatest of all scarcities; furthermore, we had to deal with facts, not theories; to do the best we could with real rather than theoretical situations. So the great bulk of the orders went to the giants of industry, then to the sub-giants, and on down the line until finally they began to fan out among the relatively small concerns. . . . We had to be cold, deliberate pragmatists in those days and, regardless of any previous political, social, or economic sentiments, we kept to one course: getting the maximum production of war implements as fast as possible. We cut a wide, rakehelly swath through the economy, knowing that any damage done could be corrected later but that if we didn't succeed there would be no economy and no country.

Nelson further acknowledged, "business firms of subaverage size, more often than not, did get the dirty end of the stick." Nelson attributes much of the success of conversion to the fact that government administrators usually had to deal with only a few large firms. He cites, as a real difficulty, the fact that American industry was "shot through with jealousy, suspicion, and white-hot competition,"<sup>88</sup> attributes that he considers commendable in peacetime but not at all suited to a unified defense effort.

Much of the physical expansion of the wartime productive capacity was financed by the government; and, at the end of the war, the government owned a number of plants capable of conversion to peacetime uses.<sup>89</sup> The Bureau of the Budget, in a history of the wartime experience, conceded that too large a proportion of these plants had been leased to or operated by larger corporations.<sup>90</sup> J. M. Clark, in a book written in 1944, *Demobilization of Wartime Economic Controls*, warned of the dangers in this situation, noting that the large firms had both the strategic positions and

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*History of the War Production Board and Predecessor Agencies, 1940-1945* (Washington: Government Printing Office, 1947), p. 31.

<sup>88</sup> *Arsenal of Democracy; The Story of American War Production* (New York: Harcourt Brace & Co., 1946), pp. 269, 277-278.

<sup>89</sup> For an estimate of the value of these government-owned plants, a breakdown of their composition, and a wartime assessment of their potentialities in peacetime use, see A. D. H. Kaplan, *Liquidation of War Production* (New York: McGraw-Hill Book Co., Inc., 1944), pp. 87-110.

<sup>90</sup> *The United States at War: Development and Administration of the War Program by the Federal Government* (Washington: Government Printing Office, 1946), p. 114.

the financial resources to acquire most of the publicly-financed facilities through postwar purchases.<sup>91</sup>

Without the pressure of wartime needs, the disposal program was designed to be carried out with due consideration for the maintenance of competition. Congress, in the Surplus Property Act of 1945, sought to meet this problem by establishing a series of priorities in which governmental organizations, non-profit institutions, veterans, farmers, and small businesses all had preference over large firms in the purchase of surplus government property. Further, any sale of facilities valued over \$10,000,000 required the approval of the Attorney General.<sup>92</sup>

Clark, like most wartime writers, assumed that the war against Japan would continue for some time after victory had been won in Europe. The rapid conclusion of the war in the Pacific substantially ameliorated one reconversion problem. Virtually all war production ceased in a very short period of time and there was little competitive advantage gained by firms reconverting to civilian production ahead of their rivals.

It is still debatable just what effect conversion, war production, and reconversion had on concentration of economic activity in the United States.<sup>93</sup> What is of importance here, however, is the necessity under which administrators of the war program found themselves to rely on big business, and the fact that traditional competitive values and the antitrust laws represented mere hindrances to the total war effort. By the end of the war, genuine concern had arisen in the minds of congressmen, administrators such as Donald Nelson, and economists such as J. M. Clark over the degree of competitiveness that would exist in the postwar economy. The Second World War experience raises a question, still highly relevant, as to the extent that a competitive system is compatible with the requirements of the nation for protracted defense spending or, for that matter, with any widespread requirements which reflect other goals than consumer sovereignty.

<sup>91</sup> New York: McGraw-Hill Book Co., Inc., 1944.

<sup>92</sup> U. S. Bureau of the Budget, *op. cit.*, pp. 478-479.

<sup>93</sup> For an attempt to ascertain this effect, see U. S. Smaller War Plants Corporation, *Economic Concentration and World War II* (Washington: Government Printing Office, 1946). This report concludes that economic concentration increased during the Second World War and that technological advance and retained earnings were such that the effects of the war would be to increase concentration during the postwar years. For a criticism of this report see Adelman, "The Measurement of Industrial Concentration," pp. 283-285.

## *Chapter Four:* THE MODERN CORPORATION AND PUBLIC POLICY: PRICE COMPETITION

### *A. Modern Defenders of Price Competition in its Traditional Role*

Essentially, the development traced in the preceding chapters has been negative. First, faith in laissez faire was abandoned; and, after examination of specific business practices and aspects of the industrial structure, economists came to a general acceptance of the position that some sort of government regulation was necessary to preserve free competition. Then, however, reliance on the automatic regulatory nature of competition was vigorously challenged. By the end of the Second World War, economists following Chamberlin on product differentiation and Triffin on the nature of cross-elasticity were questioning the operational usefulness of such time-honored concepts as industry and product. Those who followed Schumpeter wondered what relevance static theory had to modern capitalism. Although concentration had not proceeded as rapidly as Berle and Means had predicted, the question of the degree of competition within the economy was still debated. It is not surprising that economists, who had no firm and widely accepted bases on such fundamentals, could not agree on issues of public policy regarding business concentration.

In this country, virtually all of the postwar discussion of anti-trust problems has assumed the continuance of the institution of private property and of some form of free enterprise, at least in the industrial sector of the economy. As a result, studies have focused on competition, collusion, or other interrelationships among big businesses and on the impact of large firms on other areas of the economy. There remains a general conviction that competition of some sort is essential in a free-enterprise society. Yet economists have had to take a careful look at their concepts of competition, and in recent years novel concepts have arisen. Economists, not



in agreement as to just what is meant by competition, are divided on what must be done to maintain it.

Several writers have questioned the importance of the results reached by Chamberlin and Robinson, particularly the conclusion that resources are seriously misallocated under monopolistic or imperfect competition. This conclusion flowed from the proposition that an equilibrium position would be reached in which each firm's demand curve was tangent to a point on the falling portion of its average cost curve. In this vein, J. M. Clark had questioned the steepness of the slope of the long-run demand curve of a firm in monopolistic competition. This type of critical work was important, as Chamberlin and Robinson had raised some doubts as to whether competition was worth maintaining if all that could be established was monopolistic or imperfect competition, assuming pure and perfect competition to remain an ideal. In 1947 Alfred Nicols examined the behavior of consumers faced with product differentiation; and by questioning Chamberlin's assumptions, he sought to demonstrate that the results of pure competition, with price equal to marginal cost, might be rather widely attainable.<sup>1</sup>

Nicols suggested that product differentiation, with resultant consumer preference for certain brands, is the essential characteristic of monopolistic competition. In an industry without large numbers, the theories of monopoly or oligopoly can be applied appropriately. With large numbers, and no product differentiation, the theory of pure competition can be used. Yet the theory of monopolistic competition implicitly assumes that all consumers have not only a brand preference, but an ordering of preference. Without such an assumption, Nicols showed, Chamberlin could not have drawn his continuous demand curves.

If one assumes, with Nicols, that some consumers are simply price-conscious, there would be a group of consumers who would switch to the product of any firm which cut price. Further, there might be some consumers who have an attachment to one brand but who would switch to any alternate brand, without an ordering of preferences, if the price of their favored brand becomes too high relative to the prices of substitutes. Under such assumptions, the

<sup>1</sup> "The Rehabilitation of Pure Competition," *Quarterly Journal of Economics*, LXII, no. 1 (Nov., 1947), 31-63. Nicols directs his criticism at Chamberlin's work but comments that it is just as applicable to that of Mrs. Robinson.

firm's demand curve is kinked; if it raises price by a certain amount, it will lose its price-conscious buyers and some of its only slightly loyal customers. However, if the firm reduces price, it will gain a multiple of the loss it would sustain from raising price by the same amount. The firm would receive, as an approximation, the same amount of business from each of its rivals as it would lose, in total, from raising prices, plus the custom of all of the marginal buyers who had not been in the market at the higher price.

The importance of Nicols' kink depends on the number of buyers who are, respectively, price-conscious, loyal to one brand but with unordered preferences for all other brands, and loyal with ordered preferences. He noted that if the majority are of the first two types, the relevant portion of each firm's demand curve approximates infinite elasticity and price equals marginal cost. The demand curve would not slope upwards, reflecting loyal buyers, until some point far to the left of the *U*-shaped cost curve, at which point its elasticity would be irrelevant.

Nicols believed that, except under conditions of oligopoly or monopoly, there will not be too many buyers with ordered preferences, because product differentiation is difficult, if not impossible, to maintain in the long run while facing a large number of competitors. Advertising appeals, credit terms, efficiency, and politeness of service, all can and will be duplicated when there are a relatively large number of small competitors.

Nicols' work is based on assumptions which cannot be verified any more easily than can those of Robinson and Chamberlin. His description of three classes of buyers seems artificial. One might rather posit a typical consumer who sometimes seeks price bargains, who is sometimes attracted to a new brand by advertising, and who develops only fickle and unstable brand preferences. In the aggregate, such consumers would overlap all of Nicols' categories, blurring the sharp kink into a smooth curve. Yet Nicols' work did support the belief that, without oligopoly or monopoly, the demand curves facing firms might be highly elastic, and that the theory of pure and perfect competition might give a fairly adequate picture of the resource allocation that could be attained by vigorous antitrust action.

In general, economists who have not moved too far from the

traditional ideas of the benefits of competition have supported an antitrust approach to the preservation of competition. Writers such as Corwin Edwards and George W. Stocking and Myron Watkins hold to the viewpoint that the social benefits of competition lie in maximum production at prices which cover the lowest average cost and that the evils of monopolistic practices are primarily the restriction of output, higher prices, and maldistribution of resources.<sup>2</sup>

Corwin Edwards opened his 1949 book, *Maintaining Competition*, with a statement that throughout he would be assuming that competition should be maintained. He realized that the type of competition that can be maintained by public policy is not that of economic theory. Resources cannot be shifted rapidly to more profitable uses, information is always incomplete, and competitive actions may take forms such as wasteful selling efforts, product differentiation that obscures or disguises quality differences, financial manipulation, or personal rivalry with intent to injure specific competitors. Such competition does not necessarily lead to desired social goals. However, he stated, "But although the maintenance of competition will not guarantee that the economy will work well, impairment of competition by monopolistic restrictions, public or private, increases the chance that it will work badly."<sup>3</sup>

Competition may be impaired either by collusion among nominally independent firms, or by the growth of individual firms to excessive size and power. Edwards discussed both. Some joint activities of firms, such as pooling resources for industrial or scientific research, may be condoned or even approved where they do not restrict the bargaining power of the competing firms. Edwards divided restrictive agreements into two classes, exploitative and regulatory. The difference lies in motivation. Exploitative agreements are designed to gain the profits available from joint action while regulatory agreements seek only to regulate harmful methods of competition. In practice, these may be difficult to distinguish, as both types usually seek to limit price or output or to divide the

<sup>2</sup> Corwin D. Edwards, *Maintaining Competition* (New York: McGraw-Hill Book Co., Inc. 1949), pp. 7-9. G. W. Stocking and Myron W. Watkins, *Monopoly and Free Enterprise* (New York: Twentieth Century Fund, 1951), chap. i, "The Significance of Economic Organization," pp. 3-14. Stocking and Watkins stress, in addition, inequities in income distribution brought about by monopoly.

<sup>3</sup> Edwards, *Maintaining Competition*, p. 8.



market in some fashion. Edwards concluded that, despite difficulties in uncovering restrictive practices and in proving their existence, the law is generally capable of dealing with them. However, in his opinion the courts have put undue stress on price restriction and have generally been lenient towards output restrictions unless the agreements can be shown to be connected with price-fixing schemes.

Edwards next turned to the problem of size, and it is in dealing with size, pure and simple, rather than with degrees of actual market power that he made his most original and significant contribution. In addition to actual economies of scale, he pointed out, bigness gives advantages to a firm such as the ability to stand losses in one product or geographical area under conditions ruinous to smaller rivals, to force concessions from suppliers which are not available to smaller competitors and which do not reflect cost differentials, to harass competitors through expensive legal actions, and to obtain partial control over sources of credit. To Edwards' mind, these advantages should be curtailed, even in cases where existing provisions of the antitrust laws are not violated. He proposed extension of the antitrust laws to prohibit excessive size. He realized that there are grave difficulties in ascertaining permissible size, but he believed that excessive size could be discovered through two tests. First, there is the power to exploit. "Large concerns," he stated, "should be considered too big whenever one or two of them are so large relative to the others that recourse to the smaller concerns is unlikely to afford buyers adequate alternatives for escape from the policies of the large ones." Edwards next cited the power to coerce. Whether coercion is actually used or not, "concerns that obviously have coercive power should be regarded as excessively large."<sup>4</sup>

Edwards also urged sweeping changes in corporation and tax laws designed to make the attainment of excessive size far more difficult, and he advocated the repeal of legislation such as the fair trade laws which encourages restrictions on the competitive process.

George W. Stocking and Myron W. Watkins took much the same view two years later in their *Monopoly and Free Enterprise*. "Free competition," they stated, "is, so to speak, the price of freedom of

<sup>4</sup> *Ibid.*, pp. 128, 129.

enterprise.”<sup>5</sup> Like Edwards, they condemned apparently collusive practices of two or more firms such as basing-point pricing, trade association activities leading to price setting and output restrictions, and price leadership. And, like Edwards, they were concerned with the excessive sizes of individual firms. “Probably the most persistent and pervasive influence fostering growth in the size of business units,” they observed, “has been the quest for power to control the market.”<sup>6</sup>

Stocking and Watkins did not, as Edwards had done, strongly urge the passage of new antitrust legislation; but rather they stressed a broader and more inclusive interpretation of the existing law and a more vigorous enforcement policy.<sup>7</sup> They indicated their belief that the Sherman Act, if wisely interpreted and strictly enforced, is adequate to bar business behavior and structure which would otherwise hamper the workings of competition.

Stocking and Watkins noted that the corporation and patent laws have done much to foster concentration, and they recommended amendments that would check, to some extent, this function. They condemned resale price maintenance outright. Further, they argued that protective tariffs, use of the police power vested in the states to assist monopolistic exploitation of natural resources, and antitrust exemptions granted to labor unions and farm organizations had all proved detrimental to the maintenance of a competitive order.

In many respects, Edwards and Stocking and Watkins follow closely the line of reasoning established fifty years earlier by men such as De Rousiers and Ely. The only fundamental difference is that the later writers no longer look to laissez faire to restore a reasonably competitive society once the corporation laws, patent laws, tariff policy, and restrictive legislation are repealed or amended. Rather, they see a need for strong enforcement of the antitrust laws and are clearly aware that competition is not a natural state of affairs.

<sup>5</sup> *Op. cit.*, p. 5.

<sup>6</sup> *Ibid.*, p. 81.

<sup>7</sup> However, the report of the Committee on Cartels and Monopoly appointed by the trustees of the Twentieth Century Fund, which is included in *Monopoly and Free Enterprise*, does include specific proposals for amendment of the antitrust laws. See pp. 560-567. Neither Stocking nor Watkins were members of this committee, and they were not connected with the report.

### B. *The Significance of the Competitive Ideal*

Competition is valued by economists such as Nicols, Edwards, and Stocking and Watkins as the economic order most conducive to material welfare and therefore as a valid standard by which to evaluate the actual performance of a society. Yet certain basic theorems of welfare economics and a recent empirical study cast doubt on the importance of the competitive norm and on the magnitude of divergences from this norm caused by business concentration in the modern United States.

A fundamental and most serious difficulty arises in giving a precise description to the social norms which an economic system should seek to approximate. The aspect of human existence which is at the core of economics as a social study is that resources are scarce relative to wants. Thus, the basic economic problem is the allocation of these resources, including human labor, so as to give the optimum human satisfaction attainable from their use. The theory of pure and perfect competition describes such an allocation rigorously, but only under a most restrictive set of assumptions.

The theory assumes degrees of information and mobility great enough to result both in resources flowing rapidly and surely into areas of higher marginal productivity and in market-determined prices obtaining uniformly for all producers of like commodities. Thus, pure and perfect competition cannot exist in the real world where information is frequently lacking or erroneous and where mobility is restricted by fixed investment. It must remain as an ideal only. The theory assumes given states of taste and technology and does not deal with technological advance. The theory specifically excludes the time dimension and assumes a given level of employment of resources—Tibor Scitovsky, for example, has suggested that its norms are important only in periods of full employment.<sup>8</sup> Finally, the theory assumes that consumers plan their expenditures rationally. It should be noted that the assumption of profits-maximizing behavior is not as controversial in the theory of pure and perfect competition as in theories of oligopoly or monopoly, since under the assumptions of the former the firm must maximize profits in order to survive.

<sup>8</sup> *Welfare and Competition; The Economics of a Fully Employed Economy* (Chicago: Richard D. Irwin, Inc., 1951), p. 10.



Some of the assumptions of the theory were made implicitly; and their existence became evident only as a result of a systematic investigation of the conditions of optimum consumer satisfaction, a line of work which has developed into the field of welfare economics. Three of these assumptions appear to be of paramount importance; first, that there are no external economies or diseconomies; second, that the individual consumer's satisfactions are independent of the actions of other consumers; and third, that it is possible to make interpersonal comparisons of utility.

In the model of pure and perfect competition, all firms in an industry are producing at identical marginal costs, prices are equated to marginal and average costs, and the marginal rate of substitution between any two commodities is equal to the ratio of their prices. However, these equilibrium conditions will not satisfy criteria of optimal allocation of resources if marginal private costs are not equal to marginal social costs.<sup>9</sup> For example, the social cost of a plant which discharges sulphurous fumes into the atmosphere may be higher than its private cost; or the social cost of a plant constructed in an isolated area, attracting new transportation facilities and furthering social communication, may be lower than its private cost. As an industry expands, firms in the industry may experience external economies or diseconomies; but under pure competition no firm contemplating entry to or exit from the industry would consider these effects: therefore there would be a divergence between private and social cost. As long as resources are allocated in such a way as to bring about an equilibrium in terms of private cost, the allocation may not be economically efficient.<sup>10</sup>

Each consumer is assumed, in the competitive model, to spend his income in such a way that he relates the marginal utilities of all

<sup>9</sup> The problems raised by external economies and diseconomies and divergences between private and social values have long been a subject of concern. See, for example, the following, in addition to the works of Scitovsky and Baumol cited in this section: Marshall, *Principles of Economics*, 8th ed., especially pp. 365-366; A. C. Pigou, *The Economics of Welfare* (4th ed.; London: Macmillan & Co., 1932); J. Viner, "Cost Curves and Supply Curves," *Zeitschrift für Nationalökonomie*, III, 1932, reprinted in R. V. Clemence, *Readings in Economic Analysis*, II (Cambridge: Addison-Wesley Press, 1950), especially 38-42.

<sup>10</sup> Scitovsky distinguishes between technological efficiency for the firm, which is defined as the greatest output with given resources, and economic efficiency of production. Technological efficiency is a necessary condition for economic efficiency, but does not assure it. By economic efficiency, Scitovsky means production which conforms to the preferences of the economy (*op. cit.*, chap. viii, "The Efficiency of Production," especially pp. 148 and 179).

goods and services he purchases to their prices. However, this pattern will maximize his enjoyment only if his satisfactions are independent of the consumption patterns of others. The consumer may have a positive preference for relative superiority in his consumption, he may derive satisfaction from being one of the few to enjoy a certain luxury or distinguishing commodity, or, conversely, he may be unable to enjoy a high standard of living while observing poverty and misery in others.<sup>11</sup>

Finally, to demonstrate that a competitive model provides optimum allocation of resources, we must show that, not only is each consumer on the highest possible contour of his indifference map, but that the same is true for the community. Unless we can make interpersonal comparisons of utility we can make no logically convincing judgments as to the preferability of any one economic order, provided that it is economically efficient in Scitovsky's sense, over any other.<sup>12</sup>

After a discussion of these problems, Scitovsky concludes that perfect competition nevertheless has value as "a standard of perfection by which to appraise the efficiency or inefficiency of real economic systems."<sup>13</sup> W. J. Baumol, on the other hand, argues that the model of pure and perfect competition does not furnish an accurate enough description of the welfare of the community to be used as a guide for public policy on the role of the state in economic activity.<sup>14</sup>

The significance for public policy of work in welfare economics must be evaluated on two grounds: first, the seriousness of the divergences from the norm; and second, the feasibility of constructing a new norm or norms.

<sup>11</sup> These illustrations do not exhaust the possible cases of consumer interdependence. See H. Leibenstein, "Bandwagon, Snob, and Veblen Effects in the Theory of Consumers' Demand," *Quarterly Journal of Economics*, LXIV, no. 2 (May, 1950), 183-207.

<sup>12</sup> For a recent treatment of this problem, see P. A. Samuelson, "Social Indifference Curves," *Quarterly Journal of Economics*, LXX, no. 1 (Feb., 1956), 1-22.

<sup>13</sup> *Op. cit.*, p. 229.

<sup>14</sup> *Welfare Economics and the Theory of the State* (Cambridge: Harvard University Press, 1952). Baumol is concerned with the functions of private enterprise as opposed to public enterprise, particularly with a rationale for segregating those areas of the economy which would function best under public direction from those which should best be left to private initiative. He is not concerned here with the degree of competition in the private sector except to point out that only by sheerest accident could an economy of monopolies approximate the allocation of a competitive economy.

Consumer satisfactions are not independent of the consumption patterns of others, and we cannot make the precise interpersonal comparisons of utility which would be necessary to formulate with rigor the conditions of maximum welfare for the society as a whole. The consequence of these facts is that we cannot formally describe a rational pattern of income disposal for the individual and then state the conditions, such as those of pure and perfect competition, under which the efforts of each consumer to maximize his utility will result in the optimum allocation of goods and services throughout the economy. However, it may still be maintained that the structure which gives us the closest possible approximation, from a welfare standpoint, to optimum allocation, is one in which markets best reflect the components of aggregate consumer demand and business enterprises translate demand effectively into production. Such an argument must be based on the assumptions that consumers do plan their spending patterns in such a way as to acquire the goods and services they most desire, and that consumer preferences are the forces which should determine the composition of production in a society. Over time, consumers can be envisaged as adjusting in some degree to the consumption patterns of others in the process of planning their expenditures in response to the varied stimuli which influence their enjoyment. In order to justify the allocative mechanism of pure and perfect competition, it is not necessary to insist, in the face of conflicting considerations, that the result maximizes welfare. It is enough to argue that if prices and production react with maximum responsiveness to consumer wants and tastes, limited only by the availability of resources, the result will be the best attainable, given the present inability to formulate absolute welfare criteria and the allocation of resources which would follow from such criteria. Thus, the rationale for acceptance of the competitive norm can no longer be framed in terms of a rigorous proof that social welfare is maximized when the ratios of marginal utility for all pairs of commodities are equal to the ratios of their prices and when all prices are equated to marginal costs; but it must be cast in somewhat less formal terms. It would then follow that public policy is justified in seeking to establish those market conditions which best indicate consumer desires and which most effectively relay this information to the productive sector; and further, that conditions should be created and maintained under



which the productive sector is most sensitive to market pressures and reacts in such a way as to most efficiently meet new patterns of consumer desire. If this rather crude objective is held to be the most valid economic goal attainable, pure and perfect competition, under which prices are set in a free, impersonal, and informed market and firms are forced to adjust the quantity of production and productive techniques to these prices, still offers a useful norm or standard.

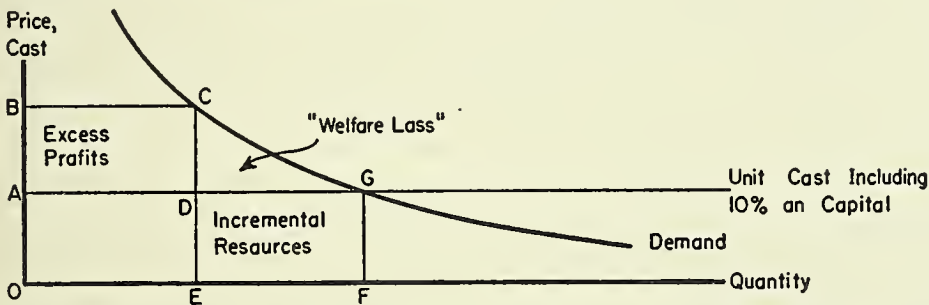
External economies and diseconomies pose serious problems. The magnitude of divergences between private and social costs is illustrated by urban blight and by the smoke control or smog difficulties in several areas of the country on the one hand, and on the other by the efforts being made to attract industry by means of tax advantages, rezoning, special legal privileges, or outright subsidies in the form of offers of land at reduced prices or as a grant. The simplest method of meeting this issue would appear to be to treat the existence of external economies or diseconomies as adjuncts to the competitive order rather than as supplying an argument for its abandonment. Then, a reasonable criterion for public policy would be the equation of private and social marginal costs. Such an equation might be approximated by the imposition of penalties, such as a legal requirement that smoke or waste control devices be installed by private firms, and fines for air or water pollution in cases where private marginal costs were lower than social. These fines and penalties could be set at a level designed to eliminate the divergence. Subsidies or discriminatory tax relief could be used in cases where the social marginal costs are lower. Such a policy, presumably carried out on a case-by-case basis by local authorities, could be regarded as a supplement rather than as an alternative to a general policy of preservation of competition. External economies or diseconomies to individual firms caused by the expansion of the industry do not seem amenable to any competitive solution by public authorities. In a competitive economy, it would not seem to be advisable to subsidize or penalize marginal firms in an attempt to induce them to remain in or leave the industry. If the external economies or diseconomies are great enough, the only feasible solution would appear to be treatment of the industry as a public utility.

The norm of competition can be regarded, then, only as an approximation to the norm under which social welfare would be

maximized; but there does not appear to be any suitable substitute which would warrant its discard.

An empirical problem in assessing the value of the norm of pure and perfect competition arises from an attempt to ascertain the actual welfare or social cost of monopolistic elements. A. C. Harberger, in a recent paper, suggested that the net cost of misallocation in the United States is small. He assumed that long-run average costs throughout various industrial classifications were constant and hence equal to marginal costs and that the elasticity of demand in each industrial classification was unitary. For his purpose, he utilized data for the period 1924-1928, collected by R. C. Epstein, showing profits as a percentage of capital. Harberger assumed that the average rate of profit in Epstein's classification was the "normal" rate which should obtain under competition and that, given unitary elasticity of demand, divergences from the normal rate would measure the misallocation of resources.<sup>15</sup> He esti-

<sup>15</sup> "Monopoly and Resource Allocation," Papers and Proceedings of the Sixty-sixth Annual Meeting of the American Economic Association, *American Economic Review*, LXIV, no. 2 (May, 1954), 77-87. Harberger explains his method by use of a simple graph, reproduced below. The descriptive captions are those of the original; the letter designations are mine.



If one assumes a "normal" profit of 10%, then, for the industry depicted, optimum allocation is achieved with an equilibrium position in which OF is produced at a unit price of OA. If 10% "excess profits" are built into the industry's average cost curve, so that it becomes BC, there is a net welfare loss of CDG. This loss follows from H. Hotelling's technique of defining the welfare loss involved in shifting from an optimum to a non-optimum position as  $\frac{1}{2} \sum p_i q_i$ , where the subscripts refer to prices and quantities of the *i*th commodity. Hotelling ignores the distributional aspects of the shift.

Again referring to the diagram, the consumers' loss is presumably ABCG, offset by a producers' gain of ABCD.

In applying this technique to Epstein's data, Harberger computed the amounts by which profits in industry groups diverged from the average. Assuming unitary elasticity of demand, the amount of excess profits would be equal to the resources misallocated, so that, by summing the positive and negative divergences separately,

mated that a transfer of 1.2 billion dollars worth of resources, or roughly 4% of the resources employed in manufacturing, would have eliminated misallocation. The welfare cost of this misallocation, Harberger computed, came to 59 million dollars, or less than one-tenth of one per cent of the national income. The period 1924-1928, Harberger suggested, was a suitable one for his purposes in that it was free of strong shifts in demand patterns or in economic structure and in that it was a period of stable prices following a similar period so that book values of capital should have at least approximated real values. In terms of 1953 levels of national income, the net loss to social welfare would have been 225 million dollars. Harberger observed that the loss in social welfare due to monopoly was significant enough to justify efforts to reduce it; yet he concluded that allocation throughout the manufacturing sector of the American economy so closely approximated the results of competition that economists would be justified in treating this sector as highly competitive.

Harberger felt that his technique overstated rather than understated the welfare loss, for reasons he noted:

I should like now to review what has been done. In reaching our estimate of the welfare loss due to monopoly misallocations of resources we have assumed constant rather than increasing costs in manufacturing industry and have assumed elasticities of demand which are too high, I believe. On both counts we therefore tend to overstate the loss. Furthermore, we have treated intermediate products in such a way as to overstate the loss. Finally, we have attributed to monopoly an implausibly large share—33 1/3 per cent—of manufacturing profits, and have distributed this among industries in such a way as to get the biggest possible welfare loss consistent with the idea that monopolies tend to make high profits. In short, we have labored at each stage to get a big estimate of the welfare loss, and we have come out in the end with less than a tenth of a per cent of the national income.<sup>16</sup>

In a discussion of Harberger's paper, Ruth P. Mack<sup>17</sup> noted three aspects of Harberger's technique which may have led to an under-

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Harberger computed the dollar value of the resources which should be transferred to other industries. Profits were then recomputed as a percentage of sales, with sales treated as an approximation of resources used, in order to compute the welfare cost.

<sup>16</sup> *Op. cit.*, p. 86.

<sup>17</sup> Papers and Proceedings of the Sixty-sixth Annual Meeting of the American Economic Association, *American Economic Review*, LXIV, no. 2 (May, 1954), 88-89.



statement, rather than an overstatement, of the welfare losses caused by monopolistic restrictions. Miss Mack observed that it was, at best, questionable to treat profits as an adequate measure of monopolistic allocation of capital. She further noted that monopoly would result in a maldistribution of resources other than capital, so that Harberger's cost curves might reflect an inefficient allocation of labor or socially unnecessary advertising outlays, to cite only two possibilities. Finally, Miss Mack commented that monopoly may lead to undesirable results which Harberger could not examine through his technique, such as maldistribution of income and price inflexibility.

G. J. Stigler<sup>18</sup> noted four reasons for believing that Harberger had understated the welfare loss of monopoly. First, Stigler noted that elasticity of demand in monopolistic or oligopolistic industries would be well above unity and that, in fact, empirical studies indicated that most industry demand curves were elastic. Second, monopolistic profits may have been capitalized so that financial records would show only a competitive rate of return on capital. Third, monopolistic gains which were distributed in factor payments, such as salaries, rents, royalties, and wages were excluded from Harberger's calculations. Fourth, the competitive rate of return should have been computed for the entire economy rather than from the manufacturing sector alone.

There would appear to be further weaknesses in Harberger's measure. The most important of these is his use of industrial classifications. The ideal treatment of monopolistic misallocations would have to measure the quantities of resources that should be transferred from the production of certain commodities to the production of other commodities, rather than confine itself to possible inter-industry transfers. The use of census classifications such as "Bakery products," "Beverages," "Newspapers," and "Castings and forgings"<sup>19</sup> obscures misallocation within rather broad groups. In aggregate, this type of misallocation may be far greater than that measured by Harberger. The requirement that a measure of misallocation treat each separate commodity, in an economy characterized by diversity and product differentiation, is not intended

<sup>18</sup> "The Statistics of Monopoly and Merger," *Journal of Political Economy*, LXIV, no. 1 (Feb., 1956), 33-35.

<sup>19</sup> Harberger, *op. cit.*, p. 80.

as a suggestion for further research along the line initiated by Harberger, but should illustrate the insuperable difficulties of this approach.

Hotelling, in defining the welfare loss resulting from monopolistic restrictions, assumed a constant utility of money. This assumption permitted him simply to subtract the monopolist's gain from the consumers' loss in computing the net welfare loss. Harberger's acceptance of this assumption, in applying Hotelling's measure to empirical data, casts doubt on the significance for public policy of the former's results since it ignores the shift of income distribution in favor of profits. Presumably, such a shift favors high income groups at the expense of consumers in all income classes.

The hypothesis that actual welfare divergences from the competitive norm may not be serious does not appear to have been demonstrated satisfactorily. Conversely, a review of Harberger's technique indicates the fundamental difficulties involved in assessing the loss due to monopolistic restrictions. An approach by commodities rather than industries implies a basic definitional difficulty and an overwhelming statistical problem. First, it would be necessary to define the word commodity in an operational fashion, so that individual commodities could be distinguished. One would then have to collect reliable statistical data on profits and sales for each commodity, a requirement which is conceptually impossible in multiproduct firms. Finally, the elasticity of demand for each commodity would have to be estimated.

Yet the problem does arise of comparing the welfare loss of monopolistic restrictions with the welfare gains attributed over time to the monopolistic sectors, such as product improvement, cost reduction, and the introduction of new products. The most that we can hope to do is to test the extent to which competition is antithetical to the dynamic gains. In areas in which there is no conflict, or in which there is reason to believe that competition would improve the dynamic performance, public policy would be on economically sound ground in seeking to reestablish competition. Harberger's results, in his own evaluation, would justify such a policy. Since, however, the welfare loss due to monopoly cannot be measured where there appears to be conflict, the gains from research, for example, must be weighed against the losses from

monopolistic restrictions on a basis of very crude estimates involving a high degree of value judgment.

*C. Recent Court Cases: the "Economic" Interpretation of Monopoly*

Since the end of the Second World War, extremely important developments in the antitrust field have been initiated in the federal courts.<sup>20</sup> Two cases, decided soon after the end of the war, inspired a number of articles in which the suggestion was made and examined that the economic and legal concepts of monopoly were converging. The distinction between these concepts is not new. It was stated cogently and succinctly by E. S. Mason in 1937.<sup>21</sup>

Basically, according to Mason, the law regarded monopoly as a restriction on competition. The courts had made sporadic efforts to determine such restrictions by assessing the competitive situation in a market; but these efforts had been unsuccessful, and generally the courts had had to rely on objective evidence of behavior. Monopolistic behavior was regarded as any action designed to restrict trade or gain control of a market. Thus, the courts had struck down agreements among competitors to share markets or maintain prices, but they had been hard pressed in dealing with outright mergers in which other considerations might have been important.

Economists, on the other hand, regarded monopoly as control rather than as restriction of a market. Since the development of theories of imperfect or monopolistic competition, they had realized that virtually all markets contained elements of both competition and monopoly. The antithesis of the legal concept of monopoly was *free* competition, in which actions were not restrained by law,

<sup>20</sup> This statement is not intended to imply that Congress is no longer concerning itself with problems of business concentration, but rather simply that the courts have raised new issues and have moved far from previous positions. Legislative activity is illustrated by the passage of the Celler-Kefauver amendment to Section 7 of the Clayton Act (64 Stat. 1125 [1950]) and the passage of the McGuire (Fair Trade) Act (66 Stat. 632 [1952]). Congressional committees have continued to investigate the monopoly problem and have heard many prominent economists and antitrust officials testify (notably, the Antitrust Subcommittee of the House Judiciary Committee). The passage of the Celler-Kefauver amendment ended long professional agitation for some such reform of the Clayton Act; but the passage of the McGuire Act indicates that economists' influence on matters of national economic legislation is still not predominant.

<sup>21</sup> "Monopoly in Law and Economics," *Yale Law Journal*, XLVII, no. 1 (Nov., 1937), 34-49.



by agreements among competitors, or by the predatory practices of large firms. For the economist, the antithesis was *pure* competition in which no seller had any control over the price of his product.

The difficulty, Mason observed, was heightened by the fact that, with new developments in economic theory, monopoly was no longer a term of condemnation to economists, whereas the courts were charged with protecting something vaguely understood as "public interest" and with evaluating "bad" trusts and "unreasonable" restraints of trade.

In the Aluminum case,<sup>22</sup> decided in 1945, Judge Learned Hand found the Aluminum Company of America in violation of Section 2 of the Sherman Act, after stating that control of 90% of the virgin aluminum ingot sold in the United States clearly indicated monopolistic control. In the Tobacco case,<sup>23</sup> the Supreme Court specifically affirmed Judge Hand's decision in the Aluminum case and went on to convict the three major cigarette firms of collusion mainly on the basis of statistical evidence as to price movements and the inferences drawn from the statistical record.

In a 1947 article Eugene V. Rostow commented that, as a result of these two cases, Mason's dichotomy between the legal and economic definitions of monopoly no longer held. The Aluminum case, Rostow felt, "finally interred and reversed the old dictum that size is not an offense under the Sherman Act." On the Tobacco case, he stated, "Parallel action based on acknowledged self-interest within a defined market structure is sufficient evidence of illegal action."

Therefore, Rostow felt, "The Supreme Court is on the threshold of recognizing what the economists call monopolistic competition as the offense of monopoly under Section 2 of the Sherman Act."<sup>24</sup>

In an article appearing in the same month, R. W. Harbeson came independently to much the same conclusion. Harbeson noted that these two decisions had the effect of moving the courts towards acceptance of market control as the test of monopoly and thus "assimilating the legal concept of monopoly to the economic."<sup>25</sup>

<sup>22</sup> *U. S. v. Aluminum Company of America*, 148 Fed. 2d 416 (1945).

<sup>23</sup> *American Tobacco Company et al. v. U. S.*, 328 U. S. 781 (1946).

<sup>24</sup> "The New Sherman Act: A Positive Instrument of Progress," *University of Chicago Law Review*, XIV, no. 4 (June, 1947), 567-600. See especially pp. 576, 577, 584.

<sup>25</sup> "A New Phase of the Antitrust Law," *Michigan Law Review*, XLV, no. 8 (June, 1947), 980.

There is an interesting divergence in the attitudes of these two writers towards the new legal viewpoint that they both felt was emerging. Rostow, a professor of law, welcomed the new interpretation as an indication that the enforcement agencies could proceed against any and all oligopolistic situations. In this respect, he cited several industries whose structure he regarded as similar enough to that of the tobacco industry to justify indictment. Harbeson, on the other hand, expressed misgivings as an economist: he felt that virtually the entire industrial structure contained elements which the courts had recently held to be illegal.

In 1949 E. S. Mason revised his 1937 statement on the dichotomy between the legal and economic definitions of monopoly. There were, he stated, two basic economic approaches to the study of monopoly, through market organizations and through performance. Most ideas of workable competition utilized both approaches. He felt that the courts had progressed towards an acceptance of the criteria of organization and performance in assessing monopolistic power and noted two main points to be extracted from the courts' postwar record:

1. That the courts have moved a substantial distance in the direction of accepting the presence or absence of market conditions associated with the notion of workable competition as appropriate tests. . . .

2. That standards of effective business performance, though imprecisely defined, still strongly influence the manner in which tests of monopoly relating to the structure of the market are applied.<sup>26</sup>

Mason was more cautious in his appraisal than either Rostow or Harbeson had been. Although the Tobacco case had gone a long way towards condemning performance without specific proof of agreement, it was still necessary, he observed, for the Government to demonstrate collusion in order to win a conviction.

Around the end of the decade, a number of articles were written on the courts' new orientation. M. A. Adelman, reviewing the A. & P. case,<sup>27</sup> argued that the new interpretation of monopoly was dangerous, as economists had pointed out that virtually all markets possessed some monopolistic elements, but they had not impressed

<sup>26</sup> "The Current Status of the Monopoly Problem in the United States," *Harvard Law Review*, LXII, no. 8 (June, 1949), 1265-1285. See especially p. 1272.

<sup>27</sup> *U. S. v. New York Great Atlantic and Pacific Tea Company*, 173 Fed 2d 79 (1949).

on the courts that certain monopolistic practices, such as secret price discrimination, might play an essential role in actual competition.<sup>28</sup> Carl Kaysen analyzed the problem of mutual dependence recognized and came to the conclusion that such "agreements to agree" could logically be regarded as a form of collusion.<sup>29</sup> Under this interpretation, according to Kaysen, conviction under the anti-trust laws was made easier, but the problem of prescribing an appropriate remedy was heightened. Walter Adams, along this same line, pointed to the inadequacy of the remedy ordered in the Aluminum case, after the "ringing judicial denunciation of monopoly" delivered by Judge Hand.<sup>30</sup> Corwin Edwards felt that the important trend in the courts was toward a recognition that types of business behavior and structure which would be acceptable in a small-business economy were to be considered illegal in a world of larger business enterprises.<sup>31</sup> Several other writers discussed the implications, both legal and economic, of the courts' new position.<sup>32</sup>

A review of decisions handed down since the war seems to indicate that enthusiasm carried some of the above-mentioned writers beyond a reasonable assessment of the courts' willingness to accept an economic interpretation of monopoly, or to accept economic reasoning to deduce the existence of a monopolistic situation. An economic interpretation of monopoly must be based on an evaluation of the ability of a particular industry or firm to contribute to the maximum material welfare possible, given the limitation of resources. Conversely, a legal interpretation of monopoly must be based on an assessment of the legality or illegality of certain acts of the defendant. There are still other aspects to the

<sup>28</sup> "The A. & P. Case: A Study in Applied Economic Theory," *Quarterly Journal of Economics*, LXIII, no. 2 (May, 1949), 238-257.

<sup>29</sup> "Collusion under the Sherman Act," *Quarterly Journal of Economics*, LXV, no. 2 (May, 1951), 263-270.

<sup>30</sup> "The Aluminum Case: Legal Victory—Economic Defeat," *American Economic Review*, XLI, no. 5 (Dec., 1951), 915-922.

<sup>31</sup> "Trends in Enforcement of the Antimonopoly Laws," *Journal of Marketing*, XIV, no. 5 (April, 1950), 657-665.

<sup>32</sup> See, for example:

Papers by M. A. Adelman, "The A. & P. Case"; W. H. Nicholls, "The Tobacco Case of 1946"; and A. Nicols, "The Cement Case," in "The Economic Consequences of Some Recent Antitrust Decisions," Papers and Proceedings of the Sixty-first Annual Meeting of the American Economic Association, *American Economic Review*, XXXIX, no. 3 (May, 1949), 280-310.

Jesse W. Markham, "Public Policy and Monopoly: A Dilemma in Remedial Action," *Southern Economic Journal*, XVI, no. 4 (April, 1950), 413-424.



monopoly problem, such as the political power of big business or the moral superiority of a competitive order, which cannot be subsumed under either the economic or legal interpretation of monopoly.

In the Aluminum case Judge Hand was required to determine the relevant market which Alcoa was accused of monopolizing, and he had to determine whether Alcoa had consciously pursued a policy of maintaining its monopolistic power. These are, basically, tests of structure and behavior. But he refused to consider arguments of the defense which were based on socially acceptable performance. In so doing, Judge Hand specifically ruled out economic criteria as determining factors by stating:

Congress . . . did not condone "good trusts" and condemn "bad" ones; it forbade all. Moreover, in so doing it was not necessarily actuated by economic motives alone. It is possible, because of its indirect social or moral effect, to prefer a system of small producers, each dependent for his success upon his own skill and character, to one in which the great mass of those engaged must accept the direction of a few.<sup>33</sup>

It is difficult to understand how the Tobacco case can be interpreted as outlawing an oligopolistic structure in which collusion is unnecessary because mutual dependence is recognized, since the Supreme Court quoted, with approval, the following statement of the trial judge to the jury:

Now the term "*monopolize*" as used in Section 2 of the Sherman Act, as well as in the last three counts of the information, means the joint acquisition or maintenance by the members of a conspiracy formed for that purpose, of the *power to control and dominate interstate trade and commerce in a commodity to such an extent that they are able, as a group, to exclude actual or potential competitors from the field, accompanied with the intention and purpose to exercise such power.*

The phrase "attempt to monopolize" means the employment of methods, means and practices which would, if successful, accomplish monopolization, and which, though falling short, nevertheless approach so close as to create a dangerous probability of it. . . .

It is in no respect a violation of the law that a number of individuals or corporations, each acting for himself or itself, may own or control a large part, or even all the business in a particular commodity.

*An essential element of the illegal monopoly or monopolization charged in this case is the existence of a combination or a conspiracy to*

<sup>33</sup> U. S. v. Aluminum Company of America, p. 427.

*acquire and maintain the power to exclude competitors to a substantial extent.*<sup>34</sup>

In reference to the statistical evidence introduced, the court made it clear that the purpose of such evidence was to indicate conspiracy:

No formal agreement is necessary to constitute an unlawful conspiracy. Often crimes are a matter of inference deduced from the acts of the person accused and done in pursuance of a criminal purpose. Where the conspiracy is proved, as here, from the evidence of the action taken in concert by the parties to it, it is all the more convincing proof of an intent to exercise the power of exclusion acquired through that conspiracy. The essential combination or conspiracy in violation of the Sherman Act may be found in a course of dealing or other circumstances as well as in an exchange of words.<sup>35</sup>

The Aluminum and Tobacco cases, taken together, would seem to set precedents under which monopolistic or oligopolistic structures may be attacked more readily, and under which collusion or other unlawful activities may be inferred from statistical collections. These cases are of great importance as they represent a break with an older, highly criticized interpretation of the antitrust laws under which the courts dealt severely with agreements among separate firms,<sup>36</sup> but hesitated to take remedial action against single firms which possessed market power as an inevitable consequence of their size.<sup>37</sup> This attitude has been criticized as encouraging outright merger in the place of less formal and more temporary agreements.<sup>38</sup> The Aluminum and Tobacco cases, together with the 1950 Celler-Kefauver amendment to the Clayton Act, give the enforcement agencies new ground on which to proceed vigorously against large firms and should obviate the criticism that the antitrust laws actually foment concentration. But, in condemning Alcoa's monopoly on non-economic grounds and in specifying collusion as the crime of the tobacco companies, the courts seem far from substituting economic criteria for legal criteria in defining a Sherman Act offense.

<sup>34</sup> *American Tobacco Company et al. v. U. S.*, pp. 785-786; italics as in original.

<sup>35</sup> *Ibid.*, pp. 809-810.

<sup>36</sup> *U. S. v. Addyston Pipe and Steel Company*; *U. S. v. Trenton Potteries Company*, 273 U. S. 392 (1927).

<sup>37</sup> *U. S. v. American Can Company*, 230 Fed 859 (1916); *U. S. v. U. S. Steel Corporation*; *U. S. v. International Harvester Company*, in which the court refused a government petition for further dissolution to strengthen the original decree.

<sup>38</sup> G. W. Stocking and M. W. Watkins, *op. cit.*, p. 278.

In the Paramount Pictures case the government was taken to task for a contention that the structure of the company was illegal *per se*, and the court emphasized again the need for proving illegal intent:

Exploration of these phases of the case [presence or absence of monopoly] would not be necessary if, as the Department of Justice argues, vertical integration of producing, distributing and exhibiting motion pictures is illegal *per se*. But the majority of the Court does not take that view. In the opinion of the majority the legality of vertical integration under the Sherman Act turns on (1) the purpose or intent with which it was conceived, or (2) the power it creates and the attendant purpose or intent.<sup>39</sup>

In a more recent case, arising out of the Paramount Pictures decision, the court stated its attitude towards conscious parallelism in strong terms:

But this Court has never held that proof of parallel business behavior conclusively establishes agreement, or, phrased differently, that such behavior itself constitutes a Sherman Act offense. Circumstantial evidence of consciously parallel behavior may have made heavy inroads into the traditional judicial attitude toward conspiracy; but "conscious parallelism" has not yet read conspiracy out of the Sherman Act entirely.<sup>40</sup>

The United Shoe Machinery Corporation case provides an excellent illustration of the appropriate use of economics, and its limitations, in an antitrust proceeding.<sup>41</sup> In this case Carl Kaysen served as an adviser to Judge Wyzanski; and the opinion reflects an economist's approach. Wyzanski, at the outset of his opinion, held that there was an identifiable market in shoe machinery, and then proceeded to analyze United's position in this market. The extent of United's monopolistic power was inferred from its share of the market, its aggregation of patents, and the barriers to entry into the shoe machinery industry. The judge chided the Government for its proposal for dissolution and stated that the requirement of his decree, that the Corporation must offer its machinery for sale as well as for lease, would achieve the competitive conditions desired. The remedy, noted Wyzanski, should be based on economic

<sup>39</sup> *U. S. v. Paramount Pictures, Inc.*, 334 U. S. 131 (1948), at pp. 173-174.

<sup>40</sup> *Theatre Enterprises Inc. v. Paramount Film Distributing Corp. et al.*, 346 U. S. 537 (1954), at p. 541.

<sup>41</sup> *U. S. v. United Shoe Machinery Corporation*, 110 F. Supp. 295 (1953).



realities; and the development of a second-hand market in shoe machinery, such as would evolve in time under his decree, would serve this purpose without dissolving United.<sup>42</sup>

The evidence that monopoly existed and the remedy were based on the economic concepts of monopoly and competition. W. L. Letwin, in a review of Kaysen's book on the Shoe Machinery case, notes very appropriately that, while economists may agree on the theory to be used, they may disagree on precisely how the theory is to be applied to a given set of facts. Indeed, competent economists may consider the application thoroughly competent and nevertheless incorrect.<sup>43</sup> Thus, Judge Wyzanski rejected Kaysen's proposal that the remedy include an absolute prohibition against further leasing. Yet it is clear that the problems involved in determining the extent of monopoly and in predicting the efficacy of a remedy are essentially economic problems and that economic analysis can and should be applied at these stages of an antitrust proceeding as a necessary albeit not sufficient ingredient of effective enforcement.

However, the guilt of United, which made the remedy legitimate, was decided on legal, not economic, grounds. Wyzanski, in finding United guilty, noted sources of monopolistic power which were unassailable and specific acts which violated the law:

The three principal sources of United's power have been the original constitution of the company, the superiority of United's products and services, and the leasing system. The first two of these are plainly beyond reproach.

He emphasized the importance of intent:

So far, nothing in this opinion has been said of defendant's *intent* in regard to its power and practices in the shoe machinery market. This point can be readily disposed of by reference once more to Aluminum. . . . Defendant intended to engage in the leasing practices and pricing policies which maintained its market power. That is all the intent which

<sup>42</sup> Note the earlier reference to Kaysen's observation that the court's new approach to monopoly made conviction easier but heightened the difficulties of proposing appropriate remedies. It should not detract from Kaysen's performance to observe that the possibility of the development of a second-hand market in shoe machinery gave Judge Wyzanski an opportunity which would not exist for those framing remedies in many other industries. Further, there was a clear-cut market which could be identified without dispute.

<sup>43</sup> Review of *United States v. United Shoe Machinery Corporation* by Carl Kaysen, *Virginia Law Review*, XLIII, no. 2 (Feb., 1957) 314-321.

the law requires when both the complaint and the judgment rest on a charge of "monopolizing," not merely "attempting to monopolize." Defendant having willed the means, has willed the end.<sup>44</sup>

Thus it seems clear that the courts have not accepted an economic interpretation of monopoly. What has happened has been that the legal definition, or the interpretation of the Sherman Act, has been expanded to the point where it is more consistent with the economic definition. Size is illegal only when accompanied by intent to monopolize. Oligopolistic structures can be attacked only when collusion is shown. But the scope of "intent to monopolize" and of "collusion" have been broadened to the extent that the enforcement agencies are in a favorable position to proceed against situations which are also open to condemnation under economic criteria, always provided that the government can marshal its statistical evidence in such a way that intent is demonstrated.

J. W. Markham does not feel that, today, economists have one frame of reference and lawyers another. Rather, some lawyers and some economists accept the "new rule of reason," and others, from both professions, maintain the "per se doctrine."<sup>45</sup> Markham argues that, basically, the conflict is over the amount of discretion to be permitted regulatory agencies and the courts. The "new rule of reason" utilizes economic theory and is oriented towards the predictive work that economic theory can do in identifying probable cases of incipient monopoly. The advocates of the "per se doctrine," which Markham identifies with the legal approach, are saying simply that Congress must make detailed decisions on the essentially economic phenomena involved in monopoly and restraint of trade and develop specific legislation accordingly. But this, for Markham, is impossible, as economic analysis, even when bolstered by the concept of workable competition, cannot provide general indicia of monopoly which could be applied to a law covering all industries at all stages of development. Economics can, however, Markham continues, provide useful insights into individual market situations, under a broad Congressional prohibition of monopoly and restraint of trade. Monopoly and trade restraints,

<sup>44</sup> *U. S. v. United Shoe Machinery Corporation*, pp. 344, 346. Italics as in original.

<sup>45</sup> "The Per Se Doctrine and the New Rule of Reason," *Southern Economic Journal*, XXII, no. 1 (July, 1955), 22-31.

Markham insists, are economic phenomena whether or not the law is applied to them.

Markham's "new rule of reason" was applied by the Federal Trade Commission in the Pillsbury case,<sup>46</sup> which was heard by the Commissioners on appeal from the decision of a trial examiner. The case hinged on the possible monopolistic effects of a merger and was brought under revised section 7 of the Clayton Act, which prohibits any acquisition of either stocks or assets where the effect of such acquisition "in any line of commerce in any section of the country. . . may be substantially to lessen competition or to tend to create a monopoly."<sup>47</sup> The Commission, in the Pillsbury case, indicated that it will and indeed must use economic analysis in determining whether a given merger, regardless of intent, is to be condemned under the Clayton Act test of illegality.

Ultimately, however, the effectiveness of economics in anti-trust enforcement depends on the use which the courts, rather than the enforcement agencies, are willing to make of economic criteria of monopoly.<sup>48</sup> The most significant indications of current legal reactions to the Clayton Act, which requires a showing of probable effect, not intent, are to be found in the Supreme Court's 1957 decision in the Du Pont-General Motors case<sup>49</sup> and in the Bethlehem-Youngstown merger case of 1958.<sup>50</sup>

The Du Pont case grew out of Du Pont's acquisition of large blocks of General Motors' stock from 1917 through 1920. Thus, the case was brought under Section 7 of the Clayton Act as it stood before the Celler-Kefauver amendment. Under the amended version, probable effects in a far broader market are considered; but the description of the proscribed effects remains the same, except for the grammatical correction of a split infinitive. The crucial economic problems in a Section 7 case are definition of the relevant market and showing that there is a threat of substantial lessening of competition or creation of monopoly. In the Du Pont-General Motors case, the court noted explicitly that

<sup>46</sup> *In the Matter of Pillsbury Mills, Inc.*, F. T. C. Docket no. 6000 (1953).

<sup>47</sup> 81st Congress, 2d Session, *U. S. Stat. L.*, Vol. 64, p. 1125.

<sup>48</sup> For a discussion of the economic criteria employed by the antitrust agencies in initiating cases under amended Section 7, see J. W. Markham, "Merger Policy Under the New Section 7: A Six-Year Appraisal," *Virginia Law Review*, XLIII, no. 4 (May, 1957), 489-528.

<sup>49</sup> *U. S. v. E. I. du Pont de Nemours & Co. et al.*, 353 U. S. 586 (1957).

<sup>50</sup> *U. S. v. Bethlehem Steel Corporation*, 168 F. Supp. 576 (1958).



determination of the relevant market is an essential prerequisite to any finding under the Clayton Act; and it then proceeded to hold that the "peculiar characteristics and uses"<sup>51</sup> of automobile finishes and fabrics do in fact distinguish them from other finishes and fabrics to such a degree that they can be identified as a distinct line of commerce. The court's definition of the relevant market in this case has been criticized as too narrow,<sup>52</sup> as the market definition in the earlier Cellophane case, which included all flexible packaging materials, was criticized as too broad.<sup>53</sup> The criticisms in both cases, it should be noted, involve the economic problem of market power over price which concerns the cross elasticities among products in the defined markets and the effects of possible substitutes excluded from the definition.

Three other features of the Du Pont-General Motors decision are of importance. First, the court held that despite an opinion expressed repeatedly by the Federal Trade Commission, the Clayton Act applies to vertical and conglomerate mergers as well as to mergers among firms producing competing products. No other interpretation of the phrase "any line of commerce" is possible, the court observed. Second, the court interpreted the word "may" in the Clayton Act test as extending to future probabilities of the proscribed effects occurring and as not being limited to probable effects at the time the securities or assets are acquired. The precedents set by these two findings, if adhered to, will require rather subtle analysis of the several markets which might be affected by a vertical or conglomerate merger as well as projection of economic effects well into the future. M. A. Adelman, however, doubts whether future probabilities will be applied widely in cases where physical unscrambling, rather than simple disposal of securities, would be involved.<sup>54</sup> The third significant feature of the Du Pont-General Motors case reflects a limitation on the use of economic analysis. Considerations of the remedy to be imposed by the trial judge have been influenced heavily by problems of equitable treat-

<sup>51</sup> *U. S. v. E. I. du Pont de Nemours & Co. et al.*, at p. 593.

<sup>52</sup> J. W. Markham, "The Du Pont-General Motors Decision," *Virginia Law Review*, XLIII, no. 6 (Oct., 1957), p. 888.

<sup>53</sup> G. W. Stocking and W. F. Mueller, "The Cellophane Case and the New Competition," *American Economic Review*, XLV, no. 1 (March, 1955), 29-63.

<sup>54</sup> "The Du Pont-General Motors Decision," *Virginia Law Review*, XLIII, no. 6 (Oct., 1957), p. 878.

ment of stockholders who may have purchased their securities after monopolistic profits were capitalized in stock prices and who would suffer additional financial loss under the provisions of the present Federal Income Tax. The loss of monopoly power which has been paid for by present stockholders should not be regarded as a barrier to the achievement of the welfare gains of increased competition; but economics can contribute little or nothing to the problems of equity involved in tax treatment of stockholders affected by court-ordered disposal of securities.

In the Bethlehem-Youngstown decision, Judge Weinfeld took pains to define carefully the relevant market which he held would be subject to a lessening of competition if the merger were permitted. Yet he further observed that the relevant market need not coincide with the "economist's concept" of a market, since what he described as the Congressional standard is binding on a court. It is not clear what Judge Weinfeld believed the economist's concept to be, as he continued, "The Section 7 market can only be defined in the light of its over-all objectives and with particular recognition that it is being defined for the purpose of determining the reasonable probability of a substantial lessening of competition and not for the purpose of determining whether monopoly power will exist as a result of the merger."<sup>55</sup> Economic analysis, certainly, can be used to ascertain the probability that competition will be lessened and is not confined to a determination that monopoly either will or will not result.

Weinfeld summed up the differences between the Sherman Act and the Clayton Act tests of illegality by stating that "we are not dealing with issues of restraint of trade, monopolization or attempt to monopolize," but that the Government had only to demonstrate "a reasonable probability that the proposed merger will substantially lessen competition or tend to create a monopoly."<sup>56</sup> Under the Clayton Act the Government does not have to prove either intent or that the forbidden results will necessarily occur, the judge observed. Weinfeld's comments are significant, as the clarity of this distinction between the Sherman Act and the Clayton Act was unfortunately blurred by the Supreme Court in the Du Pont-General Motors case when the majority opinion went to great

<sup>55</sup> *U. S. v. Bethlehem Steel Corporation*, p. 588.

<sup>56</sup> *Ibid.*, pp. 581, 603.

lengths to show intent to monopolize a market at the time of the stock acquisitions.<sup>57</sup>

Despite Judge Weinfeld's comment that the economist's definition of the market is not binding on the court, the phenomena which the court must examine are economic: examples are the nature of restrictions on competition growing out of horizontal mergers, exclusion of alternative buyers and sellers resulting from vertical mergers, and the likely exercise of increased power of various sorts derived from conglomerate mergers. Concepts such as substitution and elasticity of demand are essential to describe and to some extent evaluate conceivable effects on competition.<sup>58</sup> However, once economic reasoning is employed to ascertain the possible results of the merger under consideration, the reasonableness of the probabilities and the substantiality of the effects must be evaluated by legal, not economic standards.

The Shoe Machinery case has been used to illustrate the vital role that economic analysis can play in the formulation of remedies. The consent decree entered into by the American Telephone and Telegraph Company in 1956<sup>59</sup> further demonstrates the imposition of a remedy designed to achieve economic goals by creating an environment in which increased competition can develop rather than through a drastic and immediate physical restructuring of the industry. The Justice Department originally sought to separate A. T. & T. from its manufacturing subsidiary Western Electric, to require Western Electric to sell its holdings in Bell Telephone Laboratories to A. T. & T., and to dissolve Western Electric into three firms in the hope that these firms would offer equipment to A. T. & T. and its subsidiaries at competitive prices. The basic problem which this remedy was designed to solve grew out of the fact that the regulated telephone companies, virtually entirely owned by A. T. & T., were purchasing nearly all of their equipment at non-regulated prices from a concern which was over 99 per cent owned by A. T. & T. Adequate alternative sources of supply did not

<sup>57</sup> This feature of the opinion is noted by J. W. Markham, "The Du Pont-General Motors Decision."

<sup>58</sup> For a harsh but fair criticism of Judge Weinfeld's definition of the market and of his concepts of the competitive processes which might be influenced by the proposed merger, see M. A. Adelman, "Economic Aspects of the Bethlehem Opinion," *Virginia Law Review*, XLV, no. 5 (June, 1959), 684-696.

<sup>59</sup> *U. S. v. Western Electric Company, Incorporated, and American Telephone and Telegraph Company*, Civil Action No. 17-49 (D. Ct. N. J., 1956).



exist, even if utility commissions had required the operating telephone companies to cease dealing with Western Electric. The Pullman case had established the precedent that regulated and non-regulated business activities should not be carried on by the same firm.<sup>60</sup>

The belief that three successor firms would compete vigorously to lower price seems naïve in light of the theory of mutual dependence recognized, despite the fact that A. T. & T. and its operating subsidiaries would have been required to purchase equipment through competitive bidding. The consent decree has been attacked bitterly by the Democratic majority of the Antitrust Subcommittee on the grounds that the Justice Department, after negotiations with the defendants' lawyers, sought only a face-saving remedy;<sup>61</sup> but it would appear that if the decree is adequately enforced it will both solve the immediate regulatory problem and provide an opportunity for competitive entry without resort to the drastic structural changes proposed by the Department of Justice. Western Electric is required to maintain a cost accounting system which offers a "valid basis"<sup>62</sup> for determining the costs of equipment supplied to A. T. & T's Long Lines Division and to the operating companies. The various state regulatory commissions are empowered to inquire into Western Electric's costs and to disallow, for rate-making purposes, expenses claimed by the operating companies which are deemed excessive. If an adequate accounting system is installed, as required, the utility commissions will be in a position to attack the basic evil of setting rates paid by consumers to a business only half regulated.

Further, and of long-run significance, Western Electric and A. T. & T. are required to abandon almost all lines of business not related to common-carrier public communications within five years; and all Bell System patents are subjected to compulsory licensing. Virtually all of the patents held by members of the system prior to the date of the decree must be licensed royalty-free to all applicants except RCA, Westinghouse, and General Electric, who

<sup>60</sup> *U. S. v. Pullman Co.*, 330 U. S. 806 (1947).

<sup>61</sup> U. S. Congress. House, Committee on the Judiciary. *Report of the Antitrust Subcommittee of the Committee on the Judiciary*, House of Representatives, Eighty-sixth Congress, first session . . . on *Consent Decree Program of the Department of Justice* (Washington: Government Printing Office, 1959).

<sup>62</sup> *U. S. v. Western Electric*, Section IX.

must pay reasonable fees unless they in turn license royalty-free to the Bell System. All future patents must be licensed at reasonable fees. Technical information must be furnished at a fair charge whenever requested by a licensed firm. Finally, both defendants are enjoined from purchasing any patents or exclusive licenses from individuals or firms outside of the Bell System without permission from the court; and permission is to be granted only on a showing that the Bell System cannot acquire rights to these patents at reasonable cost in any other way. These long-run requirements would appear to strike at the bases of the Bell System's monopolistic power in manufacture of communications equipment and to open the market, as far as any antitrust action can do, to potential competitors.

In terms of market structure and predictable business behavior, the original proposal made by the Department of Justice would not appear any more beneficial to the ultimate consumer than the provisions of the consent decree, Congressional criticism notwithstanding. Utility commissions may have difficulty in interpreting Western Electric's cost data, potential entry may not prove an effective check on Western Electric's price policy, and A. T. & T. may, as the Antitrust Subcommittee's majority fears, evade the decree's intent; but the predicted effectiveness of the settlement must be compared with the likely results of feasible alternatives such as the Justice Department's proposed remedy, with the purely competitive standard as an unattainable norm. Prices should be no lower in a market composed of three large unregulated sellers and one monopolistic buyer whose rates are set to guarantee a fair rate of return on investment than in a market in which the one supplier has no patent protection against entry and is subject to at least indirect commission regulation.

We must then conclude that enthusiasm or concern carried writers of the late 1940's and early 1950's too far in ascribing a new economic outlook to the courts. If the reasoning of this study is correct, it was impossible for the courts to substitute an economic interpretation of monopoly for the legal one simply because there is no unique economic definition of the phenomenon. This point will be treated in more detail later: here it will suffice to say that an economic definition must specify the nature of the welfare to be maximized, and that, as concepts of this welfare differ, so will the

types of competition desired, and so will the judgments towards a given industrial structure. However, recent developments have been such as to give urgency to the need for clearer economic reasoning on the functioning of the large firm. If such reasoning is forthcoming, economics can play an important and constructive role in the future development of antitrust policy, particularly in indicating unsatisfactory industrial structures, in predicting the most probable market effects of mergers, and perhaps of greatest importance, in assisting in the design of appropriate remedies.

#### *D. The Report of the Attorney General's National Committee to Study the Antitrust Laws*

Consequences of abandoning the norm of pure and perfect competition without substituting a clearly defined alternative are well illustrated by the results achieved by the Attorney General's National Committee to Study the Antitrust Laws, a distinguished group of lawyers and economists who sought to apply workable competition to the formulation of a revised antitrust policy while rejecting pure and perfect competition as a sort of unreal theory.

In 1952 S. C. Oppenheim described basic revisions in the orientation of the nation's antitrust policy which he felt were advisable or urgently needed and called for the formation of a Committee on Revision of National Antitrust Policy to consider the problem and to make recommendations for appropriate policy revisions.<sup>63</sup> Basically, Oppenheim felt that antitrust policy should develop around the concept of workable competition and the rule of reason.

Oppenheim did not seek to give an explicit definition to the term workable competition; but he noted that economists were in agreement that varying degrees of imperfect competition, rather than perfect competition or pure monopoly, characterize the American economy and that, in testing the workability of this imperfect competition, economists looked to the structure of the relevant market, the behavior of firms, and their accomplishments. Under the rule of reason, all of the relevant economic interactions of structure, behavior, and accomplishment should be considered by the court. Describing the rule of reason, Oppenheim observed:

<sup>63</sup> "Federal Antitrust Legislation: Guideposts to a Revised National Antitrust Policy," *Michigan Law Review*, L, no. 8 (June, 1952), 1139-1244.



The legal pitfall [in the Sherman Act] was in the stifling word "every." For twenty years it produced conflicting judicial interpretations until the Rule of Reason dicta in the *Standard Oil* and *Tobacco* opinions of 1911 imported into the sweeping language of the statute the limitation that violations must have resulted from "undue" or "unreasonable" restrictions of competition.

Oppenheim described the rule of reason as in opposition to the per se doctrine, which stated that "certain types of conduct or the existence of certain market conditions are in and of themselves declared unlawful."<sup>64</sup> This interpretation of the rule of reason is not consistent with the language of the Supreme Court in enunciating the rule in 1911.<sup>65</sup> Under the original rule of reason, a restraint of trade violates Section One of the Sherman Act if it is held that the intent of the parties to the restraint is to impair the operation of competition in determining price or output. If the restraint is ancillary to a legitimate business purpose, then it is to be held reasonable in the sense that it is not condemned by the Sherman Act.<sup>66</sup> The court is not to inquire into the inherent reasonableness or unreasonableness of the restriction on competition, but is to condemn it without further investigation if the restraint is not found to be solely an adjunct of a legitimate operation.

In August, 1953, the Attorney General appointed a committee, much as Oppenheim had desired,<sup>67</sup> with Oppenheim and Stanley N. Barnes, Assistant Attorney General in charge of the Antitrust Division, as co-chairmen. The Committee consisted of practicing lawyers, law professors, and economists with experience in antitrust problems. The Committee's *Report*<sup>68</sup> was submitted in March, 1955.

The *Report* examined the current status of enforcement of Sections 1 and 2 of the Sherman Act, analyzed the relations of

<sup>64</sup> *Ibid.*, pp. 1150, 1153.

<sup>65</sup> J. W. Markham, in discussing the problem, explicitly refers to the "new" rule of reason and comments that it bears little relation to Justice White's dicta. "The Per Se Doctrine and the New Rule of Reason," *loc. cit.*

<sup>66</sup> Obviously, a restraint ancillary to a legitimate business purpose may be condemned under other statutes or the common law if it involves such things as fraud, violence, or intimidation.

<sup>67</sup> Oppenheim had, however, preferred that the proposed committee be financed by private funds and have no connection with any government body.

<sup>68</sup> U. S. Attorney General's National Committee to Study the Antitrust Laws. *Report*. (Washington: Government Printing Office, 1955). Hereinafter cited as *Report*.

antitrust law to foreign trade, mergers, distribution, and patent rights, discussed areas exempted from antitrust coverage, and reviewed procedure for the administration and enforcement of the antitrust laws. Although the suggestions made for reform by the *Report* have been criticized vigorously, virtually all reviewers have regarded the *Report* as an excellent systematic survey of existing antitrust law and judicial interpretations. The Committee has made a valuable synthesis which gives coherence, unity, and consistency to present standards of antitrust enforcement. The *Report*, in going beyond a study of statutes and decisions, has made an original contribution which will, if heeded by the courts and enforcement agencies, be of importance in fulfilling the committee's modestly stated objective: "to weave as coherent a pattern as possible in the light of the differences and seeming inconsistencies of the legislative and judicial strands that make up our antitrust fabric."<sup>69</sup> However, in a chapter on "Economic Indicia of Competition and Monopoly," the *Report* fails to give substance to Oppenheim's belief that the concept of workable competition can serve as a basis for use of the rule of reason as he describes the rule.

In this chapter the *Report* puts emphasis upon workable competition, and compares and contrasts workable competition with pure and perfect competition. The latter is rejected outright as a guide to antitrust policy. Thus, the *Report* states:

The concepts of pure and perfect competition are tools of theoretical analysis. They are not intended to and do not constitute a description of reality. As a theoretical model, these ideas give economists means for rigorously exploring the interrelationships of certain specified market forces. And, as previously stated, they define rigidly the theoretical conditions necessary to a form of long-run equilibrium in which prices would equal costs, including the minimum economically necessary supply price of capital.

The *Report* then notes, "The theory of pure and perfect competition is an instrument of theoretical analysis; the theory of workable competition seeks to provide a method for making necessarily less exact but more practical realistic judgments of actual market situations." Although the *Report* indicates that pure and perfect competition has theoretical value, it does not suggest that there is any practical significance to the results of the theory. In particular,

<sup>69</sup> *Ibid.*, p. 4.

the theory of pure and perfect competition is criticized for ignoring market factors which stimulate innovation. It does not seem unfair to comment here that the *Report* implies but does not state specifically that the theory of pure and perfect competition has value only in serving as an amusing diversion or as an intellectual exercise for the economist with a theoretical bent. Therefore, the *Report* notes explicitly, "We do not regard these models [those of pure or of perfect competition] as offering any basis for antitrust policy."<sup>70</sup>

Thus the Committee moved, without any apparent logical reservations, from the premise that pure and perfect competition did not and could not exist to the conclusion, "Nor should the courts be expected to be able to utilize pure and perfect competition concepts in adjudging any given market situation."<sup>71</sup> The only specific reason given for this rejection was that the theory ignored innovative factors, while it was reeognized that the theory did describe, in ideal terms, the equilibrium towards which competitive forces compelled the economy. Clearly, such a rejection should not have been made without a reasonably close examination of the nature of the competitive equilibrium.

As argued above, the competitive equilibrium, under which all production is carried out at the minimum average cost point with prices just covering costs, may serve a valuable purpose in providing a social norm. The Committee should have, at the very least, examined the proposition that public policy should seek to approximate the results that follow in theory from the conditions of pure and perfect competition, even though these conditions cannot, in fact, be achieved. The theory of workable competition is extremely useful in connection with this proposition, as it describes conditions which may be inconsistent with or contradictory to those of pure and perfect competition, but which will nevertheless result in an approximation to the competitive norm. Certainly, there are vital objections to a public policy oriented solely towards the norms of pure and perfect competition. Innovational considerations may lead to some. Others are raised by welfare examinations of interpersonal comparisons of utility and of external economies and diseconomies of scale. The theory assumes, often implicitly, that

<sup>70</sup> *Ibid.*, pp. 315-342. See especially pp. 316, 337, 338.

<sup>71</sup> *Ibid.*, p. 338.



maximization of consumer satisfaction rather than, say, national defense or military capability is the ultimate goal of economic activity. We have suggested previously that, in the absence of such offsetting factors or as the result of a subjective judgment of their relative unimportance, the results of pure and perfect competition can and should play an important role in the determination of antitrust policy. The use of concepts of workable competition for prescribing areas to be attacked and remedies to be imposed is consistent with the use of the norms of pure and perfect competition, although it may be inconsistent with the conditions specified for the unhampered operation of competitive forces.

Yet, despite its denial that the theory of pure and perfect competition offered any help to antitrust enforcement, the Committee accepted close approximations to the assumed results of pure and perfect competition as proper goals of public policy. It described these results as: (1) prices in the short run reflecting influences of demand and cost and hence, in the long run, guiding the flow of resources into the most productive uses; (2) incentives operative to force technological improvement, efficiency, and cost reduction; (3) an equitable distribution of income; and (4) an easier adjustment to industrial fluctuations resulting from flexible prices. The Committee noted that economists were far from unanimous in their assessment of the ability of competitively flexible prices to mitigate the force of the business cycle. The concept of "equitable" income distribution, as used by the Committee, is apparently consistent with distribution based on marginal productivity. Such distribution, associated with the theory of pure and perfect competition, involves a pure value judgment on the part of the Committee. The first two results, however, including pressures to force widespread adaptation to the most efficient means of production but ignoring innovation, would certainly be included within the norms of pure and perfect competition.

The Committee defined workable competition as "a kind of economist's 'Rule of Reason,'" which was to "provide appropriate leads for policy in assuring society the substance of the advantages which competition should provide."<sup>72</sup> It assumed that the basic characteristic of workable competition was that no seller or group of sellers acting together had the power to set the level of profits by

<sup>72</sup> *Ibid.*, p. 320.

restrictions on output or the raising of price. It presented a list of tests to indicate the presence or absence of workable competition, based on criteria of market structure and performance, but the fundamental test was held to be freedom of entry. "[Monopolistic] power," the *Report* noted, "cannot normally be retained for long without natural or imposed limitations on the opportunity for entry or growth of rivals."<sup>73</sup> The *Report* does not put any emphasis on the flattening of long-run cost and demand curves which J. M. Clark had posited as factors leading to the workability of competition by approximating the allocative effects of pure and perfect competition.

The concept of workable competition has been of importance to economic analysis in pointing out that certain conditions, such as secret or sporadic price discrimination and lack of information or uncertainty, may bring about a closer approximation to the ideals of pure and perfect competition than would exist in their absence, even though these conditions are antithetical to the conditions assumed for the theoretical existence of pure and perfect competition. In translating the norms of pure and perfect competition into their workable counterparts and in suggesting tests of structure and performance which would indicate the presence or absence of such norms, writers in the field of workable competition are performing valuable services. Workable competition can contribute significantly, even crucially, to the nation's antitrust policy. But as described and used by the Committee, the concept of workable competition coupled with a rejection of the concept of pure and perfect competition as a tool of analysis would seem to offer little or no hope of realizing Oppenheim's desire for a marriage of workable competition and the rule of reason. Before the theory of workable competition can be used to ascertain whether or not a given restriction on competition is reasonable or not,<sup>74</sup> a comparison must be made between the situation which the restriction creates and that which would exist in its absence. The theory of workable competition, by itself, can be applied only in order to predict what would happen following the removal of the restriction. The two situations must be compared against some sort of norm before

<sup>73</sup> *Ibid.*, p. 324.

<sup>74</sup> Here, we are concerned with Oppenheim's "new" rule of reason, and not with the doctrine enunciated by Justice White in 1911.

remedial action can be taken. The *Report*, having rejected the norms of pure and perfect competition, does not provide an adequate base for the application of the concept of workable competition, for it does not offer any alternative norms or standards. In the following chapter, we shall examine some shortcomings of freedom of entry and highly elastic long-run demand curves as conditions providing an approximation to free competition.

In the introduction to the chapter on economic indicia, the *Report* assesses the role of economic analysis in antitrust enforcement. The orientation of this introduction is towards the use of economics in the judicial process. Thus, the *Report* notes that often the effects of a certain course of action are not subject to proof and therefore must be inferred. "Economic analysis," it continues, "can furnish real assistance in this connection if means and criteria are developed for presenting evidence and for weighing its relevance, materiality and probative value in a particular market context." The *Report* goes on to note that the theory of workable competition "provides the courts with tools of analysis in making the factual inquiry into problems of competition and monopoly which are part of many but not all antitrust causes of action,"<sup>75</sup> and that the court must take account of non-economic facts.

After a review of recent court cases, we concluded that the legal concept of monopoly has been broadened to the point where it is in reasonable harmony with current economics in condemning certain situations or courses of action, but that the fundamental distinction remains that the courts must find evidence of a specific violation of the law whereas the economist looks for effects which are not consistent with maximization of material welfare in some sense. From this we should infer that the economist's most important roles in antitrust enforcement are as an adviser to the enforcement agencies in deciding upon appropriate cases to bring before the courts and in proposing remedies for the agencies to seek rather than as an expert witness before the courts or as a drafter of legal briefs. The Committee's *Report* does not mention this aspect of the use of economic analysis.

We must conclude that the Committee's economic indicia give little help in guiding antitrust policy. The Committee was aware that it had not offered a comprehensive survey of such indicia, and

<sup>75</sup> *Op. cit.*, pp. 315, 316.



this awareness is reflected in a comment by J. M. Clark which is inserted in the chapter:

J. M. Clark comments as follows: "The attempt to select economic concepts which are usefully relevant to antitrust problems results in a presentation which is selective, not only as to concepts included, but as to views held by economists on these concepts; the difficulty arises from the fact that some key concepts—such as substantial lessening of competition—are both economic and legal. Numerous economists would not subscribe to the view—which I personally hold—that the rigorous models of 'pure and perfect' competition offer no basis for antitrust policy."<sup>76</sup>

Another comment included in the body of the *Report* sums the view on the use of workable competition held here:

A few members stress that the "doctrine" of workable competition is only a rough and ready judgment by some economists, each for himself, that a particular industry is performing reasonably well—presumably relative to alternative industrial arrangements which are practically attainable. There are no objective criteria of workable competition, and such criteria as are proffered are at best intuitively reasonable modifications of the rigorous and abstract criteria of perfect competition.<sup>77</sup>

The role of economic analysis in antitrust enforcement was the subject of only one chapter of the *Report*, but most of the rest of the Committee's work is reasonably consistent with the areas of agreement reached in that chapter. The Committee recommended repeal of the Miller-Tydings and McGuire Acts, a recommendation which was supported by most critics, including Corwin Edwards,<sup>78</sup> E. S. Mason,<sup>79</sup> Clair Wilcox,<sup>80</sup> J. W. Markham,<sup>81</sup> and L. B. Schwartz.<sup>82</sup> Its refusal to endorse completely the rule of reason in opposition to per se rules was also commented upon favorably by Mason and Schwartz and, surprisingly, in light of his earlier

<sup>76</sup> *Ibid.*, p. 317.

<sup>77</sup> *Ibid.*, p. 339.

<sup>78</sup> Book review in *American Economic Review*, XLVI, no. 1 (March, 1956), 219-222.

<sup>79</sup> "Market Power and Business Conduct: Some Comments," Papers and Proceedings of the Sixty-eighth Annual Meeting of the American Economic Association, *American Economic Review*, XLVI, no. 2 (May, 1956), 471-481.

<sup>80</sup> "The Verdict on Antitrust and its Significance," Papers and Proceedings of the Sixty-eighth Annual Meeting of the American Economic Association, *American Economic Review*, XLVI, no. 2 (May, 1956), 490-495.

<sup>81</sup> "The Report of the Attorney General's Committee on Antitrust Laws," *Quarterly Journal of Economics*, LXX, no. 2 (May, 1956), 193-216.

<sup>82</sup> "The Complete Dissenting Opinion of Professor Louis B. Schwartz," *Anti-trust Bulletin*, I, no. 1 (April, 1955), 37-70.

emphasis on the rule of reason, by Oppenheim, who in a 1955 article,<sup>83</sup> indicated his belief that the *Report* has clarified semantic difficulties in reconciling the two doctrines.

The strongest criticisms of the *Report* came from a member of the Committee, Louis B. Schwartz, who drafted a dissent in which he claimed that "The Majority Report would weaken the antitrust laws in a number of respects, and, even more important, it fails to adopt necessary measures for strengthening the law so as to create a truly competitive economy in this country."<sup>84</sup> Schwartz, convinced that there was a "tide of monopoly" which only legislative intervention could "roll back," argued that the net effect of the Committee's recommendations would be to weaken antitrust enforcement. Though Schwartz never stated it unambiguously in any one passage, his dissent contains the implicit argument that the use by the courts of the economic criteria described by the *Report* would exonerate otherwise unacceptable positions of excessive concentration of private power. Schwartz does state explicitly that the purpose of the antitrust laws is to preserve liberty and continues:

This maximization of freedom is desired because of the favorable economic consequences of competition, as is fully shown in the Majority Report; but that is not all. It is also desirable on principle and for its own sake, like political liberty and because political liberty is jeopardized if economic power drifts into relatively few hands.<sup>85</sup>

Schwartz cites the preservation of power in politically responsible hands, and the development of intellectual and artistic creativity free from the standards of thought imposed by businessmen, as further non-economic goals of the antitrust laws.

Markham comments that the *Report's* discussion of economic criteria ignores one of the most important problems in antitrust enforcement, that of mutual dependence recognized in an oligopolistic situation.<sup>86</sup> The fact that the translation of the economic phenomenon of recognition of mutual dependence into legal form is replete with difficulties is not, he feels, sufficient reason for the Committee to refuse to discuss the problem. Presumably, virtually all economists' standards of workable competition would preclude

<sup>83</sup> "Highlights of the Final Report of the Attorney General's National Committee to Study the Antitrust Laws," *Antitrust Bulletin*, I, no. 1 (April, 1955), 5-36.

<sup>84</sup> *Op. cit.*, p. 37.

<sup>85</sup> *Ibid.*, pp. 39, 45.

<sup>86</sup> "The Report of the Attorney General's Committee on Antitrust Laws," *loc. cit.*

the existence of an oligopolistic rationale leading to the effects of monopoly, but there does not seem to be any easy solution to the problem of incorporating such standards in a rule of reason approach by the courts.

In conclusion, the *Report* should reflect, at best, that portion of economic analysis which a large majority of the Committee members could accept. The foregoing review should make it clear that this body of economics is not sufficient for the purpose of guiding anti-trust policy; but economists should be encouraged by the readiness with which the Committee sought to adopt economic criteria. On the other hand, the Schwartz dissent performs a valuable purpose in indicating again that economic considerations of the maximization of material welfare are not the sole tests of proper enforcement of the antitrust laws of this country.

#### *E. Postwar Professional Discussions of Concentration and Public Policy*

Economists have not been bound by traditional concepts, nor are they oblivious of the changing world around them. Rather, the history traced and to be traced in this study has been one of tearing down dogma and seeking continually to inject more realistic assumptions into economic theory. Today most economists dealing with business organization and government regulation are keenly aware of shortcomings in this field. Since the end of the Second World War, there have been several professional discussions in which problems arising from business concentration have been stressed; and it is important to review these comments because they illustrate clearly the deep dissatisfaction with the present state of economic analysis and thinking.

In 1949, D. M. Keezer asked a number of men, primarily economists and lawyers, their opinions on the extent to which the anti-trust laws had been effective in preserving competition in the United States. The replies, edited by Keezer, were published as a symposium in the *American Economic Review*.<sup>87</sup> Most of the respondents who answered that the antitrust laws had been adequately effective in preserving competition were lawyers. Either

<sup>87</sup> "The Effectiveness of the Federal Antitrust Laws: A Symposium," XXXIX, no. 4 (June, 1949), 689-724.



explicitly or implicitly, the lawyers took issue with the economists' concepts of competition, arguing that competition among a few large firms within an industry is usually as intense as that to be found in industries comprising many small firms, and that prohibition of collusion has been effective whereas a more sweeping policy of dissolution would have hampered economic progress.<sup>88</sup>

Among the economists contributing to the symposium, there was almost universal agreement that the antitrust laws have failed to preserve competition. The one exception was taken by E. S. Mason, who stated that the American economy is certainly more workably competitive than it would have been without the antitrust laws. This result, Mason continued, came about more because business firms take the antitrust laws into account in decision making than because of legal actions and remedies imposed by the courts.

Among those who felt that the antitrust laws had failed to preserve competition, there were two basic positions. Some felt that competition could not possibly be maintained, and others argued that not enough effort had been put into the fight to preserve competition.

A. R. Burns repeated, in summary form, the conclusions of *The Decline of Competition* as to why competition could not function in a modern economy. "Where oligopoly already exists," he commented, "economic conditions have not by their nature compelled competitive behavior. The effort to maintain competitive behavior under these conditions seems doomed to failure."<sup>89</sup> B. W. Lewis used a similar approach. He maintained that the antitrust laws had kept the American economy more competitive than it would have been without them, but that inevitably a business structure was arising in which competition was failing as a regulatory force.

Notable among the participants who felt that competition could be preserved by more vigorous action were F. A. Fetter and G. W. Stocking. Fetter argued that the antitrust laws had failed to preserve competition because they had been checked by corporation laws permitting one corporation to hold the stock of another, because court condemnation of restrictive agreements had encouraged

<sup>88</sup> See comments by lawyers B. P. McAllister, George Nebolsine, and B. M. Webster, all of whom hold that the American economy is highly competitive today.

<sup>89</sup> *Op. cit.*, p. 693.

mergers, and because of vague terminology in the antitrust laws, congressional neglect, pressure of lobbyists, vast corporate financial resources used to fight laws that were enforced on inadequate budgets, and the practice of hiring economists to defend monopoly. Stocking maintained that the preservation of competition would require revision of the patent law, prohibition of mergers, federal incorporation laws, more funds for the enforcement of the antitrust laws, lower tariffs, a ban on labor monopolies, stabilization of the price level, and control of advertising.<sup>90</sup>

Thurman Arnold and Wendell Berge, both former Assistant Attorney Generals in charge of antitrust enforcement, believed that, with adequate financial support and favorable public opinion, the antitrust laws could be highly effective in preserving competition. However, in the past the enforcement agencies had had neither.

At the sixty-second annual meeting of the American Economic Association in December, 1949, two groups of papers were devoted to the subject of "Capitalism and Monopolistic Competition."<sup>91</sup> The first group was subtitled "The Theory of Oligopoly," and the second, "Can the American Economy be Made More Competitive?"

If a single theme can be extracted from the diverse papers and discussions of the prominent economists who comprised this group, it might run as follows. It is a historical fact that oligopoly rather than monopoly has become the dominant pattern on the American industrial scene (Stigler). We do not yet fully understand the motivations that cause firms to seek oligopolistic positions, whether by internal expansion or merger, especially whether they are socially desirable motivations such as anticipated economies of scale, or harmful, such as the desire for the elimination of competition (Bain); and we do not know why, typically, integration stops well short of monopoly, whether through fear of the antitrust laws (Stigler) or because of uncertainty as to the future (Scitovsky). Further, we do not know whether the large firm is a more or less efficient institution for the allocation of resources than is the small one (Kaplan). We do not know, under the Chamberlinian case of

<sup>90</sup> See comments by T. J. Kreps, E. H. Levi, and M. W. Watkins for similar opinions that inadequate efforts have been made to preserve competition.

<sup>91</sup> Papers and Proceedings of the Sixty-second Annual Meeting of the American Economic Association, *American Economic Review*, XL (May, 1950), 23-104. For material particularly relevant to the present subject, see papers or comments by Stigler, Scitovsky, Fellner, Clark, Chamberlin, Bain, Wilcox, and Kaplan.

mutual dependence recognized, whether collusion exists when an industry composed of a few firms behaves in a monopolistic manner, or what public policy can or should do about the industry when collusion evidently does not exist (Fellner, Clark). Finally, we cannot define either product or market sharply enough to determine the extent of oligopoly in any given case (Wilcox, Chamberlin).

In 1952 the International Economic Association met in France for a conference on "Monopoly and Competition and Their Regulation."<sup>92</sup> Much of the time was devoted to comparisons of the regulatory activities of the nations represented, but several papers were presented dealing with broader issues of monopoly and competition. For example, Erich Schneider suggested that technological progress has led to smaller as well as larger optimum-sized plants and that integration was generally motivated by the desire for greater market power; Ingvar Svennilson of the University of Stockholm argued that analysis under competitive criteria of the efficiency of one firm in allocating existing resources was antithetical to and obscured the fundamental Schumpeterian issue of allocation over time and throughout the industry or economy; and Siri Lombardini pointed out that many of the costs of fixed inputs, such as depreciation, could be varied by the entrepreneur and were varied as his expectations changed, so that short-run marginal costs included elements often thought of as fixed costs. Other papers discussed problems of barriers to entry, wastes of competition as opposed to those of monopoly, and the relationship of monopoly to economic stability.

The need for new theory was indicated strikingly in the summary of the debate. F. Zeuthen of Denmark described five areas in which the conference had indicated that new research was needed: (1) the shapes of the long and short-run cost curves; (2) reactions of quality, as well as of price, on demand; (3) the applicability of marginal analysis; (4) profit maximization as opposed to other motives such as security; and (5) the possibility of dynamizing theory.<sup>93</sup> Other participants, including Chamberlin and Joan Robinson, voiced dissatisfactions. "Let us get the analysis

<sup>92</sup> E. H. Chamberlin, ed., *Monopoly and Competition and Their Regulation*, Papers and Proceedings of a Conference Held by the International Economic Association (London: Macmillan & Co., Ltd., 1954).

<sup>93</sup> *Ibid.*, p. 537.



right first!" Chamberlin exclaimed, before claiming to be able to establish an economically sound antimonopoly policy.<sup>94</sup>

Mrs. Robinson presented a paper entitled "The Impossibility of Competition"<sup>95</sup> in which she argued that the type of competition envisaged by economists, in which an equilibrium price and production position was posited, was impossible. She stated that in a profit-minded economy oligopoly was unavoidable where economies of scale existed, collusion was logical, and product differentiation and advertising were inevitable. Usually, expansion of capacity could be achieved far more rapidly than could reduction; and it was difficult for any firm to estimate future changes in demand or, for that matter, its marginal costs at any time. As a result, "a prudent producer normally refrains from pressing output right up to the point where marginal prime cost is equal to price." At this conference Mrs. Robinson is quoted as having said, "I make no apology for having written my book twenty years ago, but I find it shocking that people still read it."<sup>96</sup>

In a discussion with Corwin Edwards, J. M. Clark noted, with deep pessimism, the problem of relating theory to antitrust enforcement, observing that "once a case came into the courts the lawyers both for the prosecution and for the defense needed a theory, and that that theory was usually bad; it was disturbing to see the court forced to choose between bad theories."<sup>97</sup>

Also in 1952, the National Bureau of Economic Research held a conference on "Business Concentration and Price Policy."<sup>98</sup> Papers read at this conference outlined several areas in which either empirical knowledge or theoretical concepts were inadequate. This conference was important, however, in indicating some of the areas which can be and are being explored with the aid of existing tools. In all, the tone of this conference was somewhat more optimistic than that of the International Economic Association concerning the ability of economists to contribute to an understanding of concentration and an evaluation of its results.

Problems of using census data of industries and products were

<sup>94</sup> *Ibid.*, p. 494.

<sup>95</sup> *Ibid.*, pp. 245-254.

<sup>96</sup> *Ibid.*, pp. 248, 507.

<sup>97</sup> *Ibid.*, p. 521.

<sup>98</sup> National Bureau of Economic Research, Incorporated, Special Conference Series, *Business Concentration and Price Policy*.

discussed, and problems of measuring degrees of concentration and monopoly power were raised. A very important point about these papers is that the orientation of the writers was more towards making the best use of available data and techniques than towards bemoaning rather obvious shortcomings such as present census classifications. Thus, Solomon Fabricant, in commenting on a paper by M. R. Conklin and H. T. Goldstein of the Bureau of the Census, observed, "Those of us concerned with business concentration do not admit the richness of the census for our purposes; we point only to the obvious fact that the census can be made richer—with no additional cost as far as we are concerned."<sup>99</sup> Gideon Rosenbluth, after discussing alternative measures of concentration, came to the conclusion that correlations were high enough so that similar conclusions could be drawn from the several methods of measurement.

Areas were investigated beyond those of price and production equilibrium economics. Tibor Scitovsky urged the use of criteria such as the distribution of income and power, efficiency, and technological progress in evaluating large firms; and Corwin Edwards analyzed the economic power of a large conglomerate firm which does not have undue monopoly power in any one market, citing advantages arising from sheer financial power and size.<sup>100</sup> J. W. Markham's review of the merger movements in the United States led him to the conclusion that it was no longer the hope of achieving monopoly power, but rather, promoters' profits, which was the primary motive behind mergers. Some mergers, which had been inspired by technological change and the desire to adjust to innovations, had led to increased productive efficiency. At present, Markham concluded, there are no accepted criteria by which to judge the effect of mergers on competition.

Other papers read at the Princeton conference explored economies of scale, vertical integration, full-cost versus marginal pricing, types of price discrimination, price flexibility, and the effects of the Federal tax structure on concentration. These papers offered insights, but, in general, public recommendations were negative or lacking.

Two conclusions would seem to emerge from the postwar con-

<sup>99</sup> *Ibid.*, p. 36.

<sup>100</sup> These advantages are similar to the ones given on p. 122 of this study reviewing Edwards' book, *Maintaining Competition*.

ferences and symposia. First, the courts and the antitrust authorities cannot very well adopt an “economic” approach to problems of industrial concentration because there is no unanimity among economists on the issue. Second, modern economists are well aware that the problem of determining public policy towards big business is a far more complex one than that of simply identifying and restoring a “natural” economic order. The absence of agreement does not indicate a lack of extremely valuable and penetrating work.



## *Chapter Five:* THE MODERN CORPORATION AND PUBLIC POLICY: THE NEW COMPETITION

### *A. Revised Concepts of the Competitive Process*

Not all economists in the postwar period would accept a concept of competition which maintained the traditional values. Some questioned the validity of such an objective as maximum output at lowest prices at any one time in an economy typified by large business organizations, research, and the continuing development of new products. Triffin's emphasis on cross-elasticities and his willingness to discard the concepts of industry and product, as well as Schumpeter's "creative destruction" and his plea for a dynamic analysis of capitalism, provided bases for those who sought to describe the competitive process in terms that they considered relevant to the mid-twentieth century. In general, the competitive processes described were not those which the antitrust laws had been set up to maintain, and writers who rejected the static model outright became hostile towards or indifferent to antitrust enforcement.

One of the earliest studies identifying a new, mid-twentieth century economic order was Oswald Knauth's 1948 book, *Managerial Enterprise*.<sup>1</sup> Knauth set forth a framework somewhat reminiscent of Burnham in the latter's *The Managerial Revolution*, but on a more restrained, far less sweeping, and more reasoned scale. Knauth proposed the thesis that free enterprise, as understood both by economists and businessmen, has been replaced, in part, by a system that he described as managerial enterprise:

The distinctive features of managerial enterprise are several. First there is a large capital investment useful for a single purpose but of maximum efficiency for that purpose. Then there is action based upon

<sup>1</sup> New York: W. W. Norton & Co., Inc.

policies formulated to achieve the strengthening of the business. There is the creation of a demand constant enough to permit planned production with prices decided upon in advance as a part of the pattern. Other characteristics are the separation of ownership and management, and the ability to increase production at lower costs. Finally and above all there is continuity of operation.<sup>2</sup>

Knauth argued that the large corporation must, under the pressure from other large corporations and because of the size of its investment and the permanent nature of its organization, endeavor to shape markets and behave in a manner condemned by the theory of free enterprise. Establishment and maintenance of a trade position have become more important than profits. However, Knauth believed that the managerial enterprise system can and does work satisfactorily in a dynamic economy. He drew a sharp contrast between price policies under managerial enterprise and under monopoly. Managerial enterprise, as Knauth conceived of it, is a constant struggle to maintain trade positions. Such firms have market power in the accepted economic sense of monopoly, but they would lose this power as soon as they abused it.

Knauth believed that vigorous enforcement of the Sherman Act, "which looks to the past,"<sup>3</sup> merely gives rise to new problems. Stress on free competition as the alternative to monopoly ignores the promise of managerial enterprise to provide lower prices and improved products. He concluded that legal action designed to promote free enterprise as a substitute for managerial enterprise would inevitably fail. The only result of such a public policy, he stated, would be a delay in the growth of the public benefits promised by the evolutionary development of managerial enterprise.

In a 1954 Brookings Institution study, A. D. H. Kaplan<sup>4</sup> took sharp issue with those who consider giant business inimical to competition. Kaplan, in a study of census and other published figures, found a high degree of mobility in the ranks of the large firms. In 1948 only 36 companies that had been among the largest 100 in 1909 remained in that category. From this, and similar comparisons, Kaplan concluded that a firm must be highly competitive and

<sup>2</sup> *Ibid.*, p. 20.

<sup>3</sup> *Ibid.*, p. 208.

<sup>4</sup> *Big Enterprise in a Competitive System* (Washington: Brookings Institution, 1954).

progressive to retain its place in an industry.<sup>5</sup> He cited U. S. Steel's loss of position in the steel market as evidence that that company had grown too rapidly, and he suggested that competition sets its own limits on size. Kaplan's basic argument is that there is an important place for big business in a competitive economy. The record of big business in long-run price reduction, and more significantly in innovation, compares favorably to that of small business. Big business, Kaplan believed, is competitive. It competes with the producers of substitutes as well as with firms producing similar products. Intrafirm rivalry is an important spur to efficiency in companies so large that they must decentralize their operations. Often, competition of direct benefit to the consumer has taken the form of penetration of small firms' local monopolies by large firms.

A survey of postwar antitrust cases led Kaplan to the conclusion that the government has gone a long way towards establishing the illegality of size per se, but it has not established any criteria as to permissible growth. However, he noted, "The American public continues by its conduct—as investor, consumer, and employee—to foster large-scale enterprise."<sup>6</sup> Kaplan believed that there is an adequate degree of competition among the large firms which dominate the American economy.

The ideas of Knauth and Kaplan do not seem too far at variance with those of Jenks, von Halle, or Collier. The earlier writers, however, were concerned with what was happening in the early years of the rise of big business and with predicting the results of the trust movement. Knauth and Kaplan have the advantage of being able to look back when they try to evaluate what has actually happened before making a judgment as to future prospects for big business. But if one substitutes "creative destruction," "dynamic competition," or "long-run effects" for *laissez faire*, there is a remarkable resemblance in attitudes between those who held

<sup>5</sup> Kaplan's statistics and the inferences drawn therefrom have been subject to severe criticism on the grounds that some of his disappearances are due to mergers or dissolutions brought about by antitrust suits, and that the results are not at all surprising in the light of great technological change during the period under consideration. Thus, the statistics hardly lend themselves to Kaplan's interpretation of them. See book reviews by J. W. Markham, *American Economic Review*, XLV, no. 3 (June, 1955), 448-451, and G. W. Stocking, *Journal of Political Economy*, LXIII, no. 2 (April, 1955), 174-175.

<sup>6</sup> *Big Enterprise in a Competitive System*, p. 38.



that the trusts "come because they must"<sup>7</sup> and those who, today, utilize new concepts of long-run competition in efficiency, product improvement, and research.

Perhaps the most significant and influential work to be produced in the postwar period in this area of re-examination of the operation of a competitive mechanism was J. K. Galbraith's *American Capitalism: The Concept of Countervailing Power*.<sup>8</sup> Galbraith argued that the American economy is non-competitive in the classical sense, in that a big business economy could not survive unless it adopted a fairly widely accepted convention against price competition. Further, Galbraith observed, the non-price competition that emerges as a substitute is wasteful and inefficient and is tolerated only because of the United States' great wealth. For example, the use of men and resources in advertising can be condoned only in an economy that does not have greater need for them in providing food, clothing, and shelter; and it is effective only in an economy where the basic needs are well satisfied and where the demand for non-essentials and luxuries is high. The great wealth of the United States, further, permits errors in economic policy of types and magnitudes which would be disastrous in less wealthy societies.

Such an analysis, however, should not be permitted to obscure what Galbraith regards as the great underlying efficiency of the American economy. Nor can the economy's achievements be understood by use of the traditional competitive model. American capitalism works, according to Galbraith, not because of competition among producers of similar or substitute goods, but because a countervailing power arises to oppose existing power:

To begin with a broad and somewhat too dogmatically stated proposition, private economic power is held in check by the countervailing power of those who are subject to it. The first begets the second. The long trend toward concentration of industrial enterprise in the hands of a relatively few firms has brought into existence not only strong sellers, as economists have supposed, but also strong buyers as they have failed to see. The two develop together, not in precise step but in such manner that there can be no doubt that the one is in response to the other.<sup>9</sup>

Thus, Galbraith argued, the concentration of economic power in the manufacturing sector of the economy is checked by the rise

<sup>7</sup> von Halle, *op. cit.*, p. 143.

<sup>8</sup> Boston: Houghton Mifflin Co., 1952.

<sup>9</sup> *Ibid.*, p. 118.

of organized farm and labor groups and by powerful buyers such as Atlantic & Pacific, Sears Roebuck, and urban department stores. Galbraith was well aware that the process is not sure and automatic. A strong union, for example, has arisen in the weak and unorganized building trades and has not yet engendered a more efficient or highly organized industry. Also, the rise of strong unions to oppose giant industrial firms does not give rise to a countervailing check operating in the economy's favor in time of inflation, but rather to a wage-price spiral which is to the detriment of the consumer.

Yet the typically oligopolistic structure of the manufacturing sector of the United States' economy is particularly beneficial under Galbraith's concept of competition. There may be little difference between the price and production equilibrium of a purely monopolistic firm and that of an industry composed of three or four dominant firms as seen by the theory of monopolistic competition; yet the latter, in light of the theory of countervailing power, is clearly superior. An industry composed of several firms is far more susceptible to the inroads of countervailing power than is a one-firm industry, as the oligopolists' market positions are maintained only through coalition, with the ever-present possibility of collapse under pressure from large customers or buyers capable of playing off one firm against another.

Further, oligopoly gives latitude for the peculiar genius of American industry, technical development. The well-understood ban on price competition does not extend to innovation, despite a few widely known cases of patent suppression. Technological progress represents a form of competition which, unlike price cutting, is not mutually destructive. The social atmosphere favors research. "An American business concern simply cannot afford the reputation of being unprogressive."<sup>10</sup> This emphasis on research and development would not be fostered in a monopolistic society, and would be simply impossible in an economy approximating the economist's model of pure and perfect competition.

Galbraith's views on antitrust policy follow quite logically from his analysis of the economy. The theory of countervailing power gives support to those who would dissolve monopolistic firms into three or four separate entities. Yet attacks on oligopolistic struc-

<sup>10</sup> *Ibid.*, p. 95.

tures are unwise and futile, since markets dominated by a few firms represent integral parts of American capitalism.

Even more important, the enforcers of the antitrust laws must be careful to distinguish between the possessors of original power and of countervailing power. Galbraith approved of attacks on original power which was not offset by countervailing power and he was amenable to concerted attacks on all positions of market power; but he warned against attacking countervailing power and leaving the original power unscathed. Thus, Galbraith felt that the development of legislation exempting farmers and labor from the provisions of the antitrust laws is reasonable; and he vigorously attacked the Robinson-Patman Act as "especially designed to inhibit their [chain stores and other large buyers] exercise of countervailing power."<sup>11</sup>

Galbraith frankly admitted that there are weaknesses in the idea of countervailing power. Bargaining from opposed positions of strength, he noted, will not benefit the consumer in time of inflation. In fact, it would seem that if such bargaining were widespread enough, it might stimulate the inflationary spiral. The countervailing process can be circumvented by vertical integration. A more fundamental point is that the rise of countervailing power is not a universal phenomenon. Galbraith noted cases in which countervailing power had not come into existence and exceptions to the case such as the rise of a strong union organization in the chaotic building trades. It is difficult to criticize Galbraith's undogmatic presentation of the concept of countervailing power and his straightforward recognition of its limitations;<sup>12</sup> but there is a grave danger in converting Galbraith's "concept" into a "law" of countervailing power and in arguing that positions of such power must inevitably arise to oppose positions of original power.<sup>13</sup>

Galbraith's one policy recommendation is sound. He advises the antitrust authorities to attack positions of original power, or, if they prefer, all positions of power, but he warns against destroying

<sup>11</sup> *Ibid.*, p. 147.

<sup>12</sup> For comments on and criticisms of the doctrine of countervailing power, see "Fundamental Characteristics of the American Economy: Degrees of Competition, of Monopoly, and of Countervailing Power; Theoretical Significance," Papers and Proceedings of the Sixty-sixth Annual Meeting of the American Economic Association, *American Economic Review*, XLIV, no. 2 (May, 1954), 1-34.

<sup>13</sup> See discussion below of A. A. Berle's *The 20th Century Capitalist Revolution* (New York: Hareourt, Brace & Co., 1954).



organizations which have obtained countervailing power while leaving the original power intact. However, he is silent on policy towards positions of countervailing power after the positions of original power have been destroyed. Presumably, there would be justification in further antitrust action if the countervailing power did not wither away when it was no longer needed.

One cannot accept or reject Galbraith's ideas without noting their base. Galbraith did not argue that partial equilibrium theory is incorrect or that resources would not be misallocated under oligopoly. He suggested, rather, that the United States is such an opulent country that misallocation of resources is a trivial shortcoming. It is a matter of personal judgment whether or not our resources are so plentiful relative to our needs that one need not be unduly concerned with their allocation. It should be noted, however, that allocation is a far more fundamental problem in less opulent economies than in the United States today.

The concept of countervailing power, as developed by Galbraith, is neither as original nor as significant for public policy as is his identification of the United States as an opulent society. Countervailing power would seem to add very little to the arguments of George Gunton, in the late 1890's, that combinations of workers and consumers offered the best answers to the combinations in industry and trade. In a 1958 book, *The Affluent Society*,<sup>14</sup> Galbraith expanded his ideas on opulence, substituting the word "affluent" for "opulent." In this recent best-seller he argued that the economics of a world plagued with poverty is essentially irrelevant to affluent societies such as those of the modern United States and Western Europe. The basic problem of an affluent society is not maximum production, but allocation between the private and public sectors of the economy. In the United States the private sector is glutted and the public sector starved, as a result of advertising, consumer credit, the eroding effect of inflation on public services through its debasement of real government salaries, and the political need for public bodies to justify all of their expenditures at a time when national defense needs absorb half of the Federal budget. Thus, Galbraith noted "marginal" expenditures in the private sector for chrome trim and high fins on automobiles, switchblade knives

<sup>14</sup> Boston: Houghton Mifflin Co.

and pornography while the nation lacks adequate schools, highways, hospitals, and public sanitation services.

In certain respects Galbraith's analysis of affluence appears deficient. As offsets to advertising and consumer credit, governments have the advantages of requiring compulsory payment of taxes, of deluding the public as to real cost through deficit financing and, in the case of the Federal government, of the ability to create money. Further, the relevant comparisons with Galbraith's "marginal" private expenditures are the "marginal" public expenditures, on, say, Cadillacs for public officials, worldwide tours by congressmen and their families at public expense, the last piece of gilt on a redecorated public building, or the last dollar spent on agricultural price supports. The proper contrasts to lack of schools and roads in the public sector are perhaps lack of decent plumbing, inadequate heating facilities, and poor diets among lower-income groups.

For our present purpose, however, Galbraith's argument is significant in suggesting that business concentration and resulting misallocation within the private sector of the economy may be of little importance to the well-being of an affluent society. But this argument, persuasive as it is, does not support an abandonment of antitrust policy, as giant companies with monopolistic revenues at their command seem more able to influence consumer tastes through advertising and product differentiation than are more highly competitive firms. Antitrust enforcement might, indeed, be of more than slight assistance in achieving the redress in balance between private and public expenditures which Galbraith urges.

Schumpeter's depiction of dynamic capitalism and Galbraith's concept of countervailing power represent the thinking of professional economists who have questioned the conclusions of the economic analysis in which they were trained and who have posed their own alternatives. Ideas of such scope, however, presented by able and influential writers, have influenced not only fellow economists, but also men of different background and training who are concerned with business concentration and public policy. In the past few years, writers for non-professional audiences have struck similar themes. David Lilienthal's *Big Business: A New Era*,<sup>15</sup> A. A. Berle's *The 20th Century Capitalist Revolution*,<sup>16</sup> and J. D. Glover's

<sup>15</sup> New York: Harper & Bros., 1953.

<sup>16</sup> *Op. cit.*

*The Attack on Big Business*,<sup>17</sup> have proved influential among economists and the general reading public alike.

David Lilienthal's book, the earliest of the three, lauds big business as "a proud and fruitful achievement of the American people . . . an efficient way to produce and distribute basic commodities and to strengthen the nation's security . . . a social institution that promotes human freedom and individualism."<sup>18</sup> Lilienthal believes that the traditional views of competition wrongly stress price competition and competition among sellers of the same product. Neither of these, in his view, is relevant, and any effort to test the functioning of big business by these criteria is futile. The contributions of big business are in research, in creating national markets, in promoting national defense, and in giving employees a great measure of security and vastly improved working conditions. Measured against these standards, in Lilienthal's eyes, the performance of big business has been impressive.

A. A. Berle takes somewhat the same point of view as does Lilienthal in describing the benefits of big business. He describes the twentieth century as one of revolution here as well as abroad. In the United States, the revolution has taken the form of a supplanting of the older economic order by giant capitalistic units. But Berle puts most of his stress on the political aspects of big business. In a fashion similar to Galbraith's he argues that power begets opposing power; if anything, he makes more of a historical law of the phenomenon than does Galbraith:

Study of the history of politics—more accurately, of the organization of power—develops in striking repetition the phenomenon of counterpoise. Apparently absolute power in any form of organization is commonly accompanied by the emergence of countervailing power elsewhere in the same organization—usually in quite different form; and the two nuclei of power coexist in opposition to form a balance. Creation of that balance indeed seems to be the fact which preserves the continuity of the power itself.<sup>19</sup>

Berle, however, views the process somewhat differently from Galbraith. Competition may progress to the point of elimination of small competitors or their acceptance of a subservient role, but

<sup>17</sup> Boston: Harvard University Press, 1954.

<sup>18</sup> *Op. cit.*, Preface, p. ix.

<sup>19</sup> *The 20th Century Capitalist Revolution*, p. 66.



the final resolution of conflict among the giants will be political, not economic. The reason for this is that continuing competition "may wreck hundreds of thousands of lives and whole communities."<sup>20</sup> The checks to the rise of corporate power are also, for Berle, basically political. First, there is the force of public opinion, and second, the oligopolistic structure within which the giant firms are perpetually maneuvering for leadership. These checks are supported by the power of the government, which exists whether invoked or not.

Thus Berle seems to have come to an acceptance of the institution created by the splitting of the atom of property and to have resolved many of his earlier doubts and fears. Indeed, in a 1959 book,<sup>21</sup> Berle suggests that not only has the atom of property been split, but it has been smashed and transmuted into something completely new. Berle notes the rise of pension trusts, mutual funds, and other financial intermediaries to a position where their stock holdings threaten to give working control over many "blue chip" corporations. To date, he continues, the financial institutes have avoided using their power; but it is questionable that they can escape increasing exercise of it as they grow. Negatively, the institutions already support management by their inaction. As a result, the ultimate beneficiary of corporate profits, the pensioner or insurance holder, is reduced to a position where he receives only a contractual income, not directly related to the fortunes of any one firm; the executives of the funds are limited in their roles as financial administrators although they have the power to vote corporate shares which they do not, strictly, own; and corporate executives in industry manage property in which they have no direct ownership interest unless they happen to be stockholders. Such a structure, Berle feels, has no logical kinship with traditional and common-law Anglo-Saxon concepts of private property.

In the 1959 book Berle elaborates on the social controls over this propertyless power. The "corporate conscience" does exist, he maintains, as the understanding managers have of the public consensus on proper business behavior and on the "legitimacy" of positions of private power. Antitrust laws, the pluralistic nature

<sup>20</sup> *Ibid.*, p. 52.

<sup>21</sup> *Power without Property; A New Development in American Political Economy* (New York: Harcourt, Brace and Co., 1959).

of economic power, the need for profit to survive, fear of political and academic criticism, government regulations, and the possibility of punitive government intervention all serve as immediate controls bolstering the corporate conscience.

J. D. Glover is concerned with what he regards as the widespread hostility to big business. He separates the attacks into three categories: economic criticism, social and political criticism, and ethical and moral criticism. Here we need be concerned with only the first of these. Glover feels that the economic criticism is made on two basic grounds: big business is inefficient and big business is monopolistic. The first point, he asserts, can be made only by hypothesizing what would have occurred under an alternative system and is difficult to maintain in the face of big business' actual performance. The second point, Glover notes, could not be made validly by economists until the theory of monopolistic or imperfect competition demonstrated the monopolistic aspects of an industry dominated by a few large firms. He concedes that proponents of big business have not yet devised a logically satisfying answer to this attack, but he points out that the theory is invalid on two grounds. It is static, and it assumes the single motivation of profits maximization.

It is difficult to compare the works of Berle, Glover, and Lilienthal with those of earlier defenders of big business such as Gunton and Eddy. The later works are somewhat more sophisticated in that they are aware of the interrelationships between business and other powerful groups such as government and labor, and they thus put business activity in a more reasonable perspective as one of several important social forces. Further, as Glover specifically noted, modern writers must deal with an intellectually respectable, hostile economic analysis based on the theory of monopolistic competition; and since the logic appears to be on the side of the academicians, defenders of big business have been forced into a fairly thorough critical examination of the assumptions of the theory and of social goals described by the economists. The tone of the later works is more reserved, and most of the simple, catchword slogans have vanished; yet almost unbounded optimism towards the potential of big business, freed from legal restraints and public suspicion, continues unabated.

### B. *The Uses and Limitations of Static Theory*

In the previous chapters we have seen how economic analysis, in freeing itself from an ideological and philosophical orientation towards laissez faire, escaped from the essentially irrelevant and sterile question of whether the trust movement and subsequent industrial concentration were natural developments or not; and how, with the challenge to the presumption that competition operated in and of itself in a socially beneficial manner, economists were forced to re-examine their basic assumptions. We have also seen how, at present, many economists and critics are urging, as a prerequisite to advance in economic analysis, a further liberation from what they consider to be the remaining preconceptions and false assumptions. Thus, Schumpeter is echoed by Glover in urging that static theory be replaced by a dynamic theory of the firm. Galbraith and Berle both feel that stress on competition among producers of similar or closely substitutable products must be replaced by stress on competition of a different sort. Glover calls for a rejection or de-emphasis of the fundamental proposition that firms seek to maximize their profits.

In the previous chapters it has been maintained that, as laissez faire and reliance on automatic adjustments through the competitive process were being questioned, economists were seeking to add relevance to theory by introducing new assumptions which reflected the modern industrial structure to which the theory was being applied. To repeat several examples, F. A. Fetter called for use of the market and market area concepts in a context reflecting location and transportation factors; J. M. Clark introduced the economics of overhead cost and the concept of workable competition. Chamberlin noted the problems arising from product differentiation and recognition of mutual dependence; Triffin suggested the use of cross-elasticities as opposed to old concepts of the commodity and the industry; and efforts were made to reconcile profit theory with the split functions of ownership and management. The question now to be explored is whether the static partial equilibrium theory of the firm has been so discredited by critics that it should be discarded; or whether, as supplemented over the past three decades or so, it still has relevance to problems of modern industry.



In this discussion, static theory will be interpreted as making the assumptions that the firm, at any moment in time, visualizes itself as faced by certain conditions of cost and market demand; and that it is seeking a price and production level which maximizes its profits. Two observations are of importance. The cost and demand functions are *ex ante*; and the equilibrium point, at which profits are being maximized, does not necessarily describe the firm's position at the given moment, but, rather, the position towards which it is tending to move.<sup>22</sup> The first observation serves to vitiate the criticism that the firm cannot know what its unit cost or demand schedules look like: all that is required for descriptive, not quantitative, use of the theory is that, given its accounting data and the estimates of its sales organization, the firm makes the best possible approximations in seeking to maximize its profits. The second point would seem to obviate some of the stronger objections to the static nature of the theory: we need not assume that, with every change in *ex ante* cost or demand functions, the firm's price and output jump simultaneously to a new equilibrium position, but rather, more simply, that they tend towards this new equilibrium and that, over time, both the estimated functions and the equilibrium point will in all probability continue to change. This is not enough to give us a dynamic theory of the firm, but it suggests that static theory is not antithetical to dynamic considerations.<sup>23</sup>

The proposition that partial equilibrium analysis may be used effectively as a tool, however, does not answer the major indictment of the static theory. Far more important is the use of theory in establishing social criteria of performance, and it is on this ground that writers who accept the validity of partial equilibrium analysis, such as Schumpeter and Galbraith, made their most telling criticisms.

An industry might be analyzed and the conclusion reached that its structure is such that mutual dependence is recognized. With the appropriate assumptions, partial equilibrium theory may in-

<sup>22</sup> "It [the equilibrium or natural value] is the average value which economic forces would bring about if the general conditions of life were stationary for a run of time long enough to enable them all to work out their full effect" (Alfred Marshall, *Principles of Economics*, 8th ed.; London: Macmillan & Co., 1920, p. 289).

<sup>23</sup> For evident failure to understand either of these points, see Committee on Price Determination, National Bureau of Economic Research, *Cost Behavior and Price Policy* (New York: National Bureau of Economic Research, 1943), pp. 19-20.

dicate that some form of tacit collusion is inevitable. The theory may further indicate the futility of simply forbidding, by cease and desist order or injunction, the specific form which this collusion has taken, because it may predict that, without agreement or even discussion among the firms involved, a new form of tacit collusion will arise as each firm examines its own self-interest in the light of rivals' reactions to its moves. Finally, the theory may show that the behavior of the firms engendered by the oligopolistic structure of the industry is such that price is higher and production lower than would be the case under more nearly perfect competition, and that none of the oligopolistic firms is producing in the neighborhood of the least average cost point. Thus, at any given time, resources are being misallocated. However, even if this analysis is perfectly correct, the question remains as to whether or not public policy is justified in altering the structure of the industry so that conditions become more competitive and the reactions of rivals become of less concern to the reconstructed firms. Such a policy can be justified only by an acceptance of the norm of pure and perfect competition; i.e., that policy must be oriented towards making as close an approximation as possible to the ideal of optimum allocation of existing resources at a given moment of time.

The crux of the most telling arguments against traditional concepts of competition evidently lies here. The structure of modern industry is such that the norm of optimum allocation at a point of time must be weighed against other possible criteria of social performance. This is the most important problem for public policy and one for which, to date, static theory has been inadequate. It has been used, and should continue to be used, as a valuable descriptive and predictive tool in the sphere of price and production policies,<sup>24</sup> but it cannot be used, by itself, as a measure of social performance. For example, the ability to convert rapidly to military production may be of great importance for many years to come. Schumpeter has claimed that a form of dynamic competition which stimulates product improvement, innovation, and technological ad-

<sup>24</sup> Perhaps von Neumann's and Morgenstern's theory of games of strategy, with the "minimax" substituted for profits maximization, may prove of even more value in this sphere as it is developed and becomes more widely understood and applied. The criticisms made against partial equilibrium theory as to its static nature and the assumption of exclusively pecuniary motivation apply equally to the theory of games at present and are equally irrelevant.

vance will flourish successfully in an economy characterized by concentration; and Galbraith has suggested that permitting the rise of monopoly to oppose monopolistic power is a more workable alternative for achieving social benefits than is stimulating competition among producers of similar goods by dissolving firms holding some degree of monopoly power. The competitive norm must be examined in the light of other social advantages claimed for the large business organization before its relevance can be determined.

### *C. Alternative Social Goals Ascribed to a Big Business Society*

A free enterprise system is based on consumer sovereignty, and an important measure of its performance lies in its ability to translate consumer wants into satisfactions. The rationale behind a competitive system is its sensitiveness to market pressures reflecting current consumer desires; and the theory of pure and perfect competition is important in describing how, ideally, existing resources may be utilized to best satisfy these desires.

However, those writers who support big business and who are hostile or indifferent towards the nation's antitrust policy have claimed for a modern, large-scale, private enterprise economy social benefits or norms other than the optimum allocation of existing resources at any given time. The description of alternative social goals given by such writers may be divided into two general types: first, those which remain focused on consumer welfare but which consider factors other than the optimum allocation of present resources, such as research and economic growth, as more important in the dynamic development of consumer welfare; and second, those which are oriented towards other contributions which economic activity may make, such as the amelioration of hardships involved in labor or the maintenance of national defense. The discussion in this and the following two sections of this chapter assumes that static partial equilibrium theory is the most adequate tool available for describing and predicting the price and production policies of a firm in a given industry and market structure and that the competitive norm describes the best allocation of existing resources that has yet been formulated. Under these assumptions, criticisms which maintain that current economic theory is outmoded in a concentrated economy must be rejected and attention must be focused



on the central issue of the proper social goals for an economic system. An understanding of the goals which any writer advocates is necessary for an understanding of his attitudes both towards the assumptions of economic theory, in particular profits maximization, and towards the resulting description and evaluation of resource allocation.

Schumpeter has stressed economic development brought about by the introduction of innovations as a more important aspect of an economic system than either optimum allocation of resources in the short run or full employment. There is, in Schumpeter's writings, an evident personal attraction, based more on aesthetic than economic considerations, towards change, growth, innovation, and the excitement for and challenge to the individual that he envisages in a free, dynamic, capitalistic system.<sup>25</sup> Along the same line, Galbraith observes that an economic system must meet several criteria of efficiency: it must be efficient in "getting the most for the least"; it must produce what is desired by the community; it must make reasonably full use of the available and willing labor supply; it must allocate resources between consumption and investment; it must provide appropriate inducements for the adoption of new and improved methods of production; and it must make adequate provision for research and technological development.<sup>26</sup> The competitive model, he observes, meets all but the last of these requirements. However, for Galbraith, the efficiency described by the competitive model is far more important in a society faced with overwhelming poverty than it is in an "opulent" society such as the United States today. The United States, in which the efficiency lies basically in research and development, can afford gross inefficiencies in day-to-day production and distribution. The real problem facing American society is not the old economic one of efficiency, but the political and philosophical one of power. All this serves Galbraith as a prelude to his theory of countervailing power.

Recent non-technical writers on the subject of big business and public policy have, almost overwhelmingly, been influenced by Schumpeter's dynamic capitalism and Galbraith's countervailing power. Further, nearly all of those reviewed above whose attitudes

<sup>25</sup> This is not intended as a criticism of the Schumpeterian analysis. In assuming basic goals, there is certainly room for aesthetic considerations.

<sup>26</sup> *American Capitalism*, pp. 18-19.

towards big business are predominantly favorable, state quite specifically the social goals towards which they believe an economic system should be oriented. Nevertheless, the objective of increasing consumer welfare is not sharply distinguished from other goals.

Knauth considers one of the fundamental differences between his managerial enterprise and free enterprise to be the ability of firms in the former class to meet increased demand with increased capacity, more economical methods of production, and finally lower costs and prices, whereas firms in the free-enterprise sector simply adjust to increased demand by higher prices.<sup>27</sup> Under managerial enterprise, the process is cumulative, resulting in an economy freed from poverty, in which men struggle for advantage rather than for existence and in which betterment replaces need as the stimulus to economic activity.

Knauth observes that both labor and management have generally failed to recognize their new roles in managerial enterprise, but that both sides are slowly coming to have an awareness of their true positions. Under managerial enterprise, the managers have a responsibility towards their employees as great as that towards their stockholders; and union officials, who now have a great deal to say about rules of employment and working conditions as well as representing the workforce on wage issues, have responsibility to use their powers in such a way that the company's operations are continuous and successful. The modern stockholder is referred to as an "absentee owner" whose "anonymity" has isolated him from management and even from sources of information as to the affairs of his company.<sup>28</sup>

Kaplan summarizes his views on the proper objectives of an economic system in the following comment:

The case for the competitive system must rest on its ability to satisfy a combination of objectives, no one of which the American people would willingly forego. They want a wide choice of goods and services available in a free market. They want room for individual opportunity and initiative to seek the rewards of competitive effort. But they also

<sup>27</sup> This would not hold true for a competitive industry, as new firms would be attracted by the higher price. Knauth does not distinguish between the equilibrium of the individual firm and industry in free enterprise. His observation makes sense only with the implicit assumption that there is substantial immobility of resources in the free enterprise sector.

<sup>28</sup> *Ibid.*, pp. 36, 37.

expect to raise the plane of living, which requires the organization of manpower and capital for joint effort. The scale of such effort often requires co-ordination of production and distribution for mass output, and some regulation of costs, prices, processes, and contractual relations between suppliers and users. While the American people want a dynamic and innovative competitive economy, with recurring inducements to risk-taking, they want it to be in a climate where business rivalry is tempered by social ethics. They seek social benefits and protections that must be provided out of business surplus, administered by or under regulations of government.<sup>29</sup>

Lilienthal cites several "*functional characteristics*" which he believes the American public desires in our society. These are:

*A fluid, changing, enterprising kind of society.*

*An increasingly productive society.*

*An efficient and a "speedy" society.*

*A diverse society.*

. . . a *rational and stable* economic and social system in that it looks ahead and hence *conserves* its resources.

. . . a society in which all our institutions are *responsive to the public interest and the public will*.

. . . an economic and social system that is *humane and fair*; an *ethical* society.<sup>30</sup>

Lilienthal regards the shortening of hours, increase in vacations, better standards of living for industrial workers, and new understanding and mutual respect between labor and management as among the greatest triumphs of our big business society.

Both Kaplan and Lilienthal note the growing amount of investment in corporate stock by institutions such as investment trusts, endowment funds, and foundations which are able to exercise profound influence on the policies of companies in which they have invested or are considering investing in. Such institutions, they feel, give additional protection to the ultimate beneficiaries and provide the corporations with alert and financially knowledgeable stockholder groups.

Kaplan and Lilienthal each make the point that the technological knowledge and experience embodied in our largest corporations are indispensable in preparation for modern war. Lilienthal cites a case in which he, on behalf of the Atomic Energy Commission, ap-

<sup>29</sup> *Big Enterprise in a Competitive System*, p. 56.

<sup>30</sup> *Op. cit.*, pp. 182-183. Italics as in original.



proached the president of the American Telephone and Telegraph Company with the request that the Bell System undertake a vital job connected with getting atomic weapons into quantity production for the national stockpile. Lilienthal felt that the Bell "team" was the only organization in the nation set up to handle this particular job. Yet, he notes, at that very time an antitrust suit was pending which was designed to break up this "team."<sup>31</sup>

Glover states that, in the criticisms made against big business, three levels of popular aspiration can be distinguished. First, people seem to want a degree of material comfort and some assurance of its continuation—i.e., security. Second, they want a democracy with opportunity for self-realization. Third, they want a society which satisfies certain vague but highly important criteria of ethics and morality. Glover believes that big business has done a highly satisfactory job on the first level and that this is, in fact, big business' most important function. He feels further that big business can satisfy reasonable demands made on it on the next two levels, but only if businessmen recognize a responsibility to social groups other than shareholders and if they formulate these responsibilities explicitly, first in their own minds and then publicly.

Berle views the modern American corporate system as a product of the twentieth-century revolution, just as much as is the Soviet system. Therefore, the corporation is as much a social as an economic force. In the United States the corporation must be regarded as one of the chief instruments of social organization resulting from the technological revolution; and it must be evaluated in that light. As such, Berle describes the large corporation as America's "conscience-carrier."<sup>32</sup> As a result of this analysis, Berle, like Galbraith, stresses power relationships within the economy. In observing the quasi-public features of the modern corporation with its powers granted by state charter, he argues that the large corporation can and should be held to a higher standard of conduct towards its employees than was the old private business. As "conscience-carrier," the corporation should observe due process in discharging an employee, for example, and should recognize the vested rights of employees in jobs that they hold. Berle observes that the stockholder's only remaining right of any substance is the right to re-

<sup>31</sup> *Op. cit.*, pp. 100-105.

<sup>32</sup> *The 20th Century Capitalist Revolution*, p. 182.

ceive dividends and that the managers' power is now limited by other means than the stockholders' votes, notably by public consensus reflected in political action and by profitability.

Some of these writers are not trained in theoretical economics. There is, however, no reason why the opinion of a trained theoretician on the fundamental social goals of an economic system should be given any more weight than those of a prominent lawyer, a highly placed government official, or a professor of business administration such as Berle, Lilienthal, and Glover respectively. On the other hand there seems to be no reason why writers with any of these backgrounds should be particularly qualified to state what the "American people" want from an economic system, as did Kaplan and Lilienthal.<sup>33</sup>

The fact, however, that some of those who have proposed alternative goals are not professional economists has led to a great deal of confusion, most of it unnecessary, over the role of profits maximization. Glover, Berle, and Lilienthal, in particular, devote substantial effort to criticizing either the realism of the assumption of profits-maximizing behavior or the logic behind the description in economic theory of the results which follow from this assumption. In most cases the difficulty apparently stems from a misconception of the process of maximization, which leads to criticisms that are basically unwarranted. In its broadest sense, profits maximization may be described as the maximization of the discounted present value of the stream of expected net revenues or, identically, maximization of the present value of the firm as a going concern.<sup>34</sup> Virtually any business behavior, short of obviously irrational acts, can be analyzed in terms of profits maximization if the term is defined so broadly and if we are willing to accept subjective valuations of the sizes and shapes of future income streams without inquiring into the validity of such guesses. The types of business behavior described with approval by recent authors who have rejected their own versions of profits maximization are fully consistent with the broad definition of the term. Certainly, these writers have indicated

<sup>33</sup> In fairness, it should be noted that both Kaplan and Lilienthal qualified their claims for the American people with clear statements that the goals cited were those which they *personally* believed or felt that the public ascribed to.

<sup>34</sup> For a discussion of this concept of profits maximization, see W. J. Baumol, *Economic Dynamics, An Introduction* (New York: Macmillan Co., 1951), pp. 22-26, 63-66.

that business executives are concerned with and seek to promote to the maximum the ability of their firms to survive and grow. The profits maximization which is specifically criticized is customarily a narrow sort of behavior which maximizes the immediate profit on any transaction without regard for future consequences. Such criticism misses its mark if it is aimed at the professional economists of today. Profits maximization, in order to be of use in analysis, must be consistent with the broad definition, yet it must be defined sharply enough in terms of the problem to be solved to describe rational reactions to certain stimuli. When so used, the assumption is not vulnerable to the criticisms leveled by Glover, Berle, and Lilienthal; and it is consistent with, if not useful in analyzing, the behavior patterns which they describe as existing in big business.

The social goals which have been described are not, in many instances, antithetical to the results predicted to follow from profits-maximizing behavior. The recent writers on big business reviewed above are unanimous in their belief that big business organizes production efficiently. Efficiency is not defined; but as used by these authors, it would appear to be consistent with the idea of the greatest possible total value of output relative to the cost of the inputs used. Maximization of profits would serve to assure such a condition of efficiency. Indeed, it would seem that profits maximization is necessary to obtain the desired efficiency. If a writer maintains that big business is or should be run for the benefit of its customers, its workers, or the nation as a whole as well as for its stockholders, but if he is not willing to sacrifice productive efficiency, then his best course is not to attack the concept of profits maximization. Rather, he should accept it and insist that business organizations should maximize their profits whether they do in fact or not; but he could then propose a distribution of these profits which would benefit individuals or groups other than the stockholders.

We are concerned here with the social benefits ascribed to big business in a concentrated economy, not to free enterprise as opposed to some other order. Basically, the benefits claimed can be grouped into two types. First, it is claimed that a big business system is better adjusted to modern sociological and political realities than would be a more classically competitive one. Second, it



is claimed that dynamic aspects of big businesses' performance are such that a big business system fulfils requirements customarily thought of as economic, dealing with material well-being, better than one which more nearly allocates resources optimally at one point of time. The first group of claims raises extremely interesting and important questions, but these questions are beyond the scope of economic analysis oriented towards antitrust enforcement. The following discussion will be confined to an examination of claims based on considerations of economic welfare.

We have rejected criticisms which are based on the assumption that, given the goal, economic analysis is incapable of evaluating the performance of a particular firm or industry. The immediate necessity is for economists who hope to give guidance to public policy towards big business to examine the traditional goal of optimum allocation of resources in terms of its consistency with alternative social goals. In the event that incompatibilities are found, it will become necessary to give weights to the various goals, and clearly the alternatives that individuals will accept as important enough to influence public policy will vary from person to person with differing philosophical, ethical, and political orientations. However, many of the divergent policy recommendations of equally competent economists would become understandable, if not reconcilable, if these economists would consistently state their conceptions of what they want an economic system to accomplish as forcefully and as prominently as did Lilienthal, for example, and if their readers and critics would evaluate their recommendations in terms of the goals sought.

#### *D. Optimum Allocation and Alternative Social Goals: the Consumer*

The social goals other than optimum allocation of present resources which have been cited by recent writers on big business have been divided into two classes—consumer welfare, and benefits to other groups. We are now in a position to discuss the extent to which these goals, as attributed to big business, are complementary or opposed to optimum allocation in the static sense. Consumer welfare will be examined first, and then benefits to other groups.

The most important dynamic consideration raised by modern writers is that of research and development leading to technological advance and economic growth. In classical economics, the major problem in the area of economic growth was that of diverting resources from present consumption to investment, or future consumption. Such a process involved immediate sacrifice, or abstinence, on someone's part, and it was brought about by the payment of interest to the one who abstained. Investment was made and interest paid because investment increased future consumption by more than it curtailed present consumption. Innovation played little part in such a schema.

Any economically sound innovation increases future production at a lesser relative sacrifice than investment based on existing techniques. Unless this is the case, the innovation will not come into being, but will remain an unutilized invention or idea. At the extreme, an innovation which takes the form of replacing a worn-out machine with one of improved design but equal or lower cost, or which represents a better combination of already used productive factors, increases future consumption without any sacrifice of present consumption. Thus, a system which encourages the development of new products or improvement in the techniques of production may prove to be superior, over time, to one which, through competition and a freely determined market rate of interest, allocates resources optimally, both in the present and between present and future consumption. This could be true even though the innovating system's methods of allocation were far from perfect.

Following Schumpeter, virtually every writer on big business has stressed the importance of research and development. It is argued first, that the type of competition taking place among large firms, in which price competition is discouraged, stimulates the introduction of new techniques and products;<sup>35</sup> and second, that

<sup>35</sup> According to Schumpeter, not only will the rate of innovation be speeded up under dynamic competition, but the rate at which new processes are adopted will be more nearly optimum than the rate in a perfectly competitive society. In the perfectly competitive society, although there would be less incentive for innovative activity, once an innovation is made it must be adopted by all producers immediately, or they will be unable to produce at the new, lower prevailing price. In a concentrated economy, with patent laws and the possibility of keeping technological know-how and new processes secret, a firm will weigh the advantages of installing new equipment against the costs of scrapping the old, and it will time the introduction

present-day research and development methods are so costly and time-consuming, requiring teams of trained personnel, that only large companies can afford to engage in the most promising lines. There appears to be a great deal of truth in these arguments. The first contention, however, cannot be regarded as completely justifying non-price competition in innovation unless it is shown that the gains from the new techniques and products are somehow passed on to the consumer; and in this respect, price competition retains its importance.

The second argument appears, at present, to be valid. Although it may be debatable whether large industrial laboratories have any real advantages over smaller industrial or university laboratories, or even over a basement workbench, in fundamental research, there would not appear to be any doubt that the translation of a basic discovery into an operative, potentially profitable industrial process does require the services of teams of scientists, engineers, and industrial designers. Further, developmental work is apt to be very costly, involving pilot plants, trial runs, and an unpredictable number of operating difficulties to solve. Large-scale research and development facilities, the ability to absorb losses and provide large quantities of developmental capital, and the resources to finance many projects on the statistical probability that the payoff from a few successful ones will justify the entire research program, would all seem to give a large firm advantages in its research effort over smaller competitors.

Research and development may provide a potent defense for monopolistic revenues. If a firm did not feel that patent protection, the intangible understanding of production problems and techniques that it gains from experience, and the advantages arising from being the first to enter a new field, all give it a degree of monopolistic power which it can and should exploit, it might not feel justified in continuing its research and development programs. Monopolistic profits may further be defended as a source of funds essential to the continued support of the research organization, as well as an incentive necessary to inspire research activity.

Research and development cannot, in and of themselves, justify excessive size and market power of a firm, nor do they provide an

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of the innovation with the wearing out of existing facilities so as to maximize its total profits (*Capitalism, Socialism, and Democracy*, pp. 96-98).



irrefutable argument for its social merit. At least three other aspects of research activities must be examined. First, research may be subject to monopolistic control or an oligopolistic rationale; second, research may be directed towards perpetuating positions of market power; and third, research may be carried on by firms small enough to possess only insignificant power.

Concern with research in evaluating the social performance of a firm might simply lead to a shift from emphasis on one type of monopolistic behavior, in the markets for specific products, to emphasis on another type, in research. It is at least conceivable that a research-minded firm, perpetually renewing its monopolistic positions, might be considered to be as inimical to economic welfare as a firm perpetuating a monopoly in a single product. Undoubtedly, research effort could be as badly misallocated as any other factor of production.

However, there is little evidence to suggest that research can be monopolized. It has become commonplace to comment on the stress on research now occurring throughout American industry. As one economist put it, "My own conviction is that any industry today which fails to incorporate a research conception will languish and die."<sup>36</sup> It is difficult, if not utterly impossible, to suppress for long the fundamental chemical or physical principles on which industrial advances are based. The prospect of a firm, or a group of firms, no matter how large, ever achieving a significant degree of control over the supply of technological talent, continually renewed by the colleges and universities of the country, is remote. The great bulk of fundamental research is either financed by the government or done in government laboratories and, to a lesser extent, is conceived and carried out in the universities.

To date, industrial research remains highly competitive. It is the essence of the Schumpeterian concept of dynamic competition. Conceivably, a type of oligopolistic rationale could develop in research, such that a dominant firm might find it advisable to restrict research activities on the ground that the position of the industry as a whole would be improved if existing products were not subject to competition from potential substitutes, and on the further ground

<sup>36</sup> W. R. MacLaurin, "Technological Progress in Some American Industries," Papers and Proceedings of the Sixty-sixth Annual Meeting of the American Economic Association, *American Economic Review*, XLIV, no. 2 (May, 1954), 189.

that other firms in the industry were aware of this possibility and were prepared to curtail their research programs. But for this situation to arise, the initiating firm would have to feel sure not only that all other firms in the industry felt the same way, but that all firms capable of expansion into areas normally thought of as falling in that industry's preserve had developed the rationale.

W. J. Fellner has described difficulties which would serve to hinder the development of an oligopolistic rationale in research. Fellner notes that what he calls spontaneous co-ordination or quasi-agreements rarely, if ever, cover aspects of industrial behavior which are based on inventiveness. Activities such as technological improvement, product variation, and advertising do not seem amenable to restriction through recognition of mutual dependence. Fellner, noting that price competition is often checked by quasi-agreement, suggests that restrictions on inventive activities would be essential to joint profits maximization but are difficult to attain because no one firm can estimate its own or other's future success, or, "the present value of this future flow of inventiveness cannot be calculated with sufficient accuracy to include it in the present appraisal of relative strength."<sup>37</sup> Further, there is less danger to the industry from retaliation to non-price competition stemming from inventiveness, as the inventiveness which is needed to retaliate is a scarce resource. This situation must be contrasted to that existing under price competition, in which every firm can cut price readily and without limit in response to rivals' actions.

However, it does not suffice to demonstrate that a firm possesses monopolistic power in one or many product lines but is competitive in its research, and to conclude that, if monopoly profits are necessary as a part of a broader, dynamically competitive situation, public policy is best served by permitting the market monopolies to continue. This may be a perfectly valid conclusion, but it does not exhaust the problem. Competition in research and monopoly in specific products cannot be analyzed simply on two separate, unrelated levels in order to decide that public policy is best served by permitting monopolies of small importance, or of a lower level, to survive in order to encourage a more important and socially beneficial type of competition on another level. A. E. Kahn has pointed out that the patent law, based on the assumptions of a

<sup>37</sup> *Op. cit.*, pp. 183-185.

single inventor, an identifiable invention, and profit motivation serving to promote exploitation of new discoveries, is inapplicable to modern industrial society.<sup>38</sup> The single inventor has been replaced by the corporate research team; a given product involves the contributions of many singly patentable discoveries; and under oligopolistic conditions a firm may find it more profitable to suppress an invention than to develop it for a market.

Research may be used, on the level of market competition in given products, as an integral part of the process of exploiting and maintaining monopolistic positions in the products, as well as for the development of new products and as part of a dynamic competition. The uses of patents for protecting existing processes, harassing actual or potential competitors, and building up monopolistic structures based on licensing agreements have been well demonstrated.<sup>39</sup> Walter Adams has recently attacked corporate research for other tactics related to the exploitation of a market position:

The investigations of the Bone, Kilgore and Truman committees in the early forties demonstrated that the research-mindedness of corporate giants does not always redound to the benefit of the public. These investigations revealed—though we seem since to have forgotten—that when Du Pont developed a pigment which could be utilized either in paints or as a textile dye, the director of one of its research laboratories wrote: “Further work may be necessary on adding contaminants to ‘Monastral’ colors to make them unsatisfactory on textiles but satisfactory for paints.” The investigations described the Rohm & Haas research effort to discover a contaminant which would make methyl methacrylate suitable for use as a commercial molding powder but unfit as an ingredient for dentures. The investigations told of the heroic effort by the General Electric research organization to shorten the life of flash-light batteries, etc.<sup>40</sup>

The relationship between a firm’s research activities and its market power may be a complex one. Research may support as

<sup>38</sup> “Fundamental Deficiencies of the American Patent Law,” *American Economic Review*, XXX, no. 3 (Sept., 1940), 475-491.

<sup>39</sup> See G. W. Stocking and M. W. Watkins, *Monopoly and Free Enterprise*, chap. xiv, “Patents and Monopoly,” pp. 447-490. See also, U. S. Temporary National Economic Commission, Monograph no. 31.

<sup>40</sup> “Technological Progress and Economic Institutions—Discussion,” Papers and Proceedings of the Sixty-sixth Annual Meeting of the American Economic Association, *American Economic Review*, XLIV, no. 2 (May, 1954), 190-191.



well as be supported by a monopolistic market. And a monopolistic market may channel research into socially undesirable channels. However, if the firm holding a monopolistic position in a given product believes that substitutes are either available or can be made available readily, it will gain little advantage from shortening the life of a product or limiting its usefulness. Further, a firm which is oriented towards the introduction of new products and the development of new markets will find a reputation for high quality and reliability, built up over time in older markets, to be an important intangible asset.

There is still another possible competitive aspect to research which Schumpeter suggests, but does not discuss.<sup>41</sup> Over time, a research-oriented firm may leave behind it a wake of reasonably competitive industries which have come into being as a result of its research and developmental efforts, and such a firm may retain its own monopolistic character through further research, acquisition of new patents, and the development of new products and processes.

Smaller firms need not own their own research and development facilities. There are a large number of commercial laboratories and research institutes throughout the country, most of which were established for purposes of military research during the Second World War and which now offer the majority of their research services on contract to private firms.<sup>42</sup> However, these independent research organizations have apparently had little or no effect on the concentration of industrial research. Two recent studies prepared by the Bureau of Labor Statistics for the National Science Foundation note that concentration of research and development is far greater than concentration of production or employment. According to the first of these two studies, manufacturing companies with 5,000 or more employees had 40 per cent of manufacturing employment but did 70 per cent of the research and development work in 1953. In the same year, firms employing less than 500 contributed 35 per cent of manufacturing employment but only 10

<sup>41</sup> See his footnote reference to "edited" competition, *Capitalism, Socialism, and Democracy*, pp. 90-91.

<sup>42</sup> National Science Foundation, *Research and Development by Nonprofit Research Institutes and Commercial Laboratories*, 1953. Prepared for NSF by the Maxwell Research Center, Syracuse University (Washington: Government Printing Office, 1956), p. 1. The National Science Foundation estimated that, in 1953, there were well over 1700 such organizations, excluding medical laboratories (*ibid.*, p. 10).

per cent of research and development expenditures.<sup>43</sup> The study also found that companies with 5,000 or more workers employed approximately three-fifths of the scientists and engineers in manufacturing industries and were responsible for about two-thirds of research and development expenditures in manufacture during the year 1953; whereas these same companies employed only about two-fifths of the workers engaged in manufacture.<sup>44</sup>

By 1956, the second study reported, manufacturing firms with 5,000 or more employees had increased their percentage share of research and development to 79.5 per cent, while less than 8 per cent was performed by companies with less than 500 employees. In part, the increased proportion of research and development attributable to the large firms results from corporate growth, as some reporting firms had less than 5,000 employees in 1953 and more than that number in 1956. Approximately one-third of the growth represented increased research and development expenditures by firms which had 5,000 or more employees in both years.<sup>45</sup>

The impact of the independent research organizations on concentration of research and development activity has been minor, as shown in the following table:

*Spending by Private Industry for Research and Development Conducted Outside Company Supplying Funds, by Size of Company, 1953 and 1956*

| <i>Size of Company</i>  | <i>Spending (in millions of dollars)</i> |         |
|-------------------------|------------------------------------------|---------|
|                         | 1953                                     | 1956    |
| 8-99 employees          | \$ 17.5                                  | \$ 19.2 |
| 100-499 employees       | 14.3                                     | 16.0    |
| 500-999 employees       | 8.3                                      | 9.5     |
| 1,000-4,999 employees   | 21.2                                     | 33.0    |
| 5,000 or more employees | 46.1                                     | 110.9   |
| all companies           | 107.4                                    | 188.7   |

Sources: *1953-1954 Survey*, p. 67, and *1956 Survey*, p. 14.

Although research and development activities performed by independent organizations on contract are somewhat less concentrated

<sup>43</sup> National Science Foundation, *Science and Engineering in American Industry: Final Report on a 1953-1954 Survey* (Washington: Government Printing Office, 1956), p. 4. Hereinafter referred to as the *1953-1954 Survey*.

<sup>44</sup> *Ibid.*, pp. 25-27.

<sup>45</sup> National Science Foundation, *Science and Engineering in American Industry: Report on a 1956 Survey*. Prepared for NSF by the U. S. Bureau of Labor Statistics (Washington: Government Printing Office, 1959), pp. 10, 11. Hereinafter referred to as the *1956 Survey*.

than all research and development within private industry, it must be noted that the magnitudes are small in comparison with total private spending on research and development of \$2.4 billion in 1953 and \$3.4 billion in 1956.<sup>46</sup> Further, it should be observed that the great bulk of the increase in spending on contracted research between 1953 and 1956 originated in firms of 5,000 or more employees.

Statistics on research and development expenditures are notoriously unreliable, as no matter how carefully the terms are defined by the agency collecting the data, the reporting firms will have serious difficulties in deciding whether or not to include certain budgeted expenditures. Further, most reporting firms' accounting systems will not provide data required by the collecting agency's definitions. Given the aura of prestige surrounding research, some firms may be tempted to err on the side of overstatement. Nevertheless, the surveys conducted for the National Science Foundation are the most complete studies available to date and are based on very carefully designed questionnaires. It is extremely unlikely that inaccuracies in the reported data could cause meaningful distortions in the picture presented of great concentration in modern industrial research in the United States.

Another study prepared for the National Science Foundation, devoted to the independent research organizations, noted that most of the industrial contracts of these institutions came from large and medium-sized firms, many of whom "farmed out" projects which strained the capacities of their own laboratories. The study suggested that small firms are unable to utilize outside research facilities because they lack the skilled employees who could distinguish the problems amenable to research and could interpret and use the results of such research.<sup>47</sup>

Whether or not a firm owns its own research facilities, it must have the funds to pay for research and development. Schumpeter's suggestion that past profits may be used to finance further innovations may partly explain the predominance of large firms in such activities. Another possible explanation, more fundamental than the one offered to the National Science Foundation, would be that

<sup>46</sup> 1953-1954 *Survey*, p. 67, and 1956 *Survey*, p. 13.

<sup>47</sup> *Research and Development by Nonprofit Research Institutes and Commercial Laboratories*, 1953, pp. 2-3.



the results of research appear more profitable to firms which anticipate exploiting the products in monopolistic markets. For example, a monopolist may price both old products and new substitutes in such a way as to maximize the summed profits from both; and it may have a great advantage in distributing a new product through its established channels.

The possibility remains of several firms financing research through trade associations or similar groups which none could afford alone. The National Science Foundation did not find this type of research to be extensive: in 1953, 590 co-operative organizations reported spending a little less than \$20.5 million on joint research out of total private industrial research expenditures of \$2.4 billion. Further, most of the funds came from organizations with a relatively small number of members.<sup>48</sup> Although the study does not report on the size of individual firms comprising the organizations, one would expect, *prima facie*, that the more concentrated industries would have the organizations with the smaller membership rolls.

The independent research organization has only recently become an important feature of American industry. In the future, these organizations may serve to lessen the concentration of research and development; but there is no current evidence of such a result. Here it should be noted that under the Schumpeterian concept of dynamic competition, a firm is as much an innovator when it acquires and develops others' patents or uses the research results of others as when it makes the fundamental discoveries. Schumpeter noted that the essence of innovation is the actual introduction of a new process or a change in the production function. Innovation, he observed, is quite possible without invention; and invention need not lead to innovation.<sup>49</sup>

We are now in a position to indicate some of the implications for public policy of the research orientation of large firms. First, the fact that a firm possesses some degree of monopolistic power in one or more markets should not be, in and of itself, grounds for dissolution or other drastic remedy. Not only may monopolistic

<sup>48</sup> National Science Foundation, *Research by Cooperative Organizations: A Survey of Scientific Research by Trade Associations, Professional and Technical Societies, and Other Cooperative Groups*, 1953. (Washington: Government Printing Office, 1956), pp. 1, 22. The study was prepared by Battelle Memorial Institute.

<sup>49</sup> *Business Cycles*, pp. 84-85.

revenues be necessary to finance research, but the prospect of new monopolistic markets may be essential to call forth continued research efforts. Dissolution might either destroy research or make its results far more costly. The firm's social performance must be evaluated not only in terms of its own market behavior, but in terms of the industrial structures that eventually evolve from its activities in the creation of new products.

The distant prospect of monopolistic or oligopolistic situations in research should be guarded against. Although there does not appear to be any immediate problem for public policy in this regard, the time may come when an interpretation of "restraint of trade" broad enough to cover the development of new commodities as well as the production and sale of existing commodities will be of importance to antitrust policy.

In cases where research is used as a weapon to perpetuate control over existing markets, the practice should be attacked. It would appear that proceedings of the traditional type, designed to lessen market power, would suffice. General Electric would find no advantage in shortening the life of flashlight batteries if it faced effective market competition from other producers of such batteries. Compulsory licensing decrees, cease-and-desist orders, or dissolution proceedings designed to bring competition into the product market would be preferable to a prohibition of further research activities or a separation of the research organization from the production departments of a large firm. Continuing scrutiny by the Department of Justice, and occasional harassing suits against particular market behavior, may do much to discourage this type of research, as it is useless unless accompanied by control of product markets. For example, one solution to the "Monastral" incident cited by Walter Adams, in which Du Pont evidently wanted a coloring agent suitable for paints but not for textile dyeing, would be to foster a greater degree of competition in the dyestuff industry. Du Pont would have no apparent motive for inhibiting new textile dyes while promoting new colors for paints unless the company's salesmen believed that there was a market to capture in paints, while the new dyes would simply render existing Du Pont products obsolete. This solution seems preferable to one which would attack directly the research organization which had developed "Monastral."

There is one important caveat to attach to the claims that research and development, as fostered by big business, are of great social benefit. When the argument is stated in its extreme form,<sup>50</sup> the reader may gain the impression that the resultant progress is treated as arising at no other cost than that of some small divergence from optimum allocation at any one time. This is clearly not the case. The industrial laboratory and research department are becoming integral parts of most large firms. As research becomes institutionalized, resources are deliberately directed away from current production. To date we have only rough estimates on the national annual expenditure on research, but it is undoubtedly several billions of dollars.<sup>51</sup>

The point has not yet been reached, except possibly by a very few giant firms, at which regular and sustained research is extensive enough so that the expected return from the research dollars can be calculated on the basis of the mathematical probability of any particular project's success, but there is a tendency in this direction. If this point is reached, so that the estimated marginal efficiency of research can be equated to the current interest rate plus a risk premium, there would seem to be little or no theoretical distinction between innovation and investment utilizing existing techniques, in so far as the allocation of resources involving present sacrifice for future production is concerned. Both would represent deliberate sacrifice of present consumption, and both would have an equilibrium point varying with the rate of interest beyond which no further sacrifice was desired. In this case it might be argued that the firm which was large enough to support a broad program of research and development would probably be large enough to retain substantial earnings and to have privileged access to the capital market and credit sources, and therefore, it might be distorting the allocation of resources so that greater present sacrifice was being made than would be desired in a perfectly competitive system. The fact that such an argument against big business is

<sup>50</sup> See Lilienthal, *op. cit.*, pp. 68-72, for an example.

<sup>51</sup> A study of business plans by McGraw-Hill Publishing Company showed that research and development expenditures by industry amounted to \$6.1 billion in 1956. Planned spending by industry for 1960 aggregates \$9.3 billion. See U. S. Congress, Senate (Committee print, 85th Congress, 2d session), *The Research and Development Factor in Mergers and Acquisitions* (Washington: Government Printing Office, 1958), p. 8.



not made in investigations or discussions of industrial concentration may be taken as an indication that research and development still yield social benefits well in excess of their costs.<sup>52</sup>

Other dynamic aspects of big business's benefits to consumers are frequently cited, but they do not appear to have the force or significance of the claims based on research and development. Knauth, Kaplan, Lilienthal, and Berle all echo J. M. Clark's observations on the economics of overhead cost; and they all feel that the sort of price competition envisaged in economic theory is simply destructive when engaged in by present-day large firms. Further, they all follow Schumpeter in arguing that price competition has been supplanted by new forms of competition which, in a dynamic world, are of equal or greater benefit to the consumer. Technological improvement is merely one of these forms, albeit the one most frequently alluded to. Knauth stresses the desire for repeat sales and a continuing customer relationship as being more important in his managerial enterprise than gaining the maximum price advantage on each individual sale. Kaplan maintains that competition among giant firms today takes the form of "continuous creation of product variations and consequent redistribution of markets."<sup>53</sup> Lilienthal cites competition in style, packaging, and advertising as adding an irrational factor to competition but one which is fortunate for "the fun of living."<sup>54</sup> Lilienthal also emphasizes the importance of vastly improved credit and distribution systems.

This non-price competition, other than technological improvement, is generally described in terms consistent with Chamberlin's product differentiation. Since such product differentiation is incompatible with pure and perfect competition as well as with perfect monopoly, we cannot, in theory, say that it ever reflects accurately the degree of diversity desired by the consuming public, no matter how great the competitive pressures which force producers to introduce new styles, improvements, and artistic wrappings. Only if each differentiated product were sold under condi-

<sup>52</sup> See however, Carolyn Shaw Solo, "Innovation in the Capitalist Process: A Critique of the Schumpeterian Theory," *Quarterly Journal of Economics*, LXV, no. 3 (Aug., 1951), 417-428. The author notes that innovation is now a "regular part of normal business procedure" (p. 427).

<sup>53</sup> *Big Enterprise in a Competitive System*, p. 55.

<sup>54</sup> *Op. cit.*, p. 52.

tions of perfectly elastic demand at a point at which price equaled total average cost, thus eliminating the inefficient or undesired, would such an optimum be assured; and this requirement is impossible even in theory simply because product differentiation, if successful, decreases the elasticity of demand for the differentiated product and thus for the firm producing it. Therefore, although it may be quite true that non-price competition adds a zest to economic life that would be missing under either greater monopoly or more perfect competition, there cannot be a strict normative description of the optimum degree of this zest, framed in partial equilibrium terms. There will always be some people who do not share Lilienthal's idea of "fun" and who regard much of advertising, fancy packaging, and yearly model changes as a social liability.

Another line of argument has been that, in the long run, most of the price benefits of a competitive system are achieved for consumers, despite the degree of concentration existing in the American economy. In this line of reasoning it is presumed that the large firms with heavy capital investment to protect are concerned not only with avoiding ruinous price wars, but also with maximizing their profits in the long run. Further, because of the specialization of executive functions, which allows some men to devote their time primarily to long-run considerations, and because of the caliber of their highly paid executives, the large firms may be better able to estimate the long-run consequences of their actions than are the small ones. As a result, price competition may still occur, but the relevant curves, from an economic analyst's point of view, are the long-run cost and demand curves. In such a case, the problems presented by the existence of overhead costs vanish. In his article "Toward a Concept of Workable Competition," J. M. Clark suggested that this situation existed in many industries, and that where it did, the equilibrium solution given by the theory of monopolistic competition might not differ too drastically from that of pure and perfect competition, because "long-run curves, both of cost and demand, are much flatter than short-run curves, and much flatter than the curves which are commonly used in the diagrams of theorists."<sup>55</sup>

There have since been empirical studies which suggest the correctness of Clark's observation on the flatness of the long-run cost

<sup>55</sup> *Op. cit.*, p. 246.

curve; but they are inconclusive and cannot be regarded as more than tentative corroboration.<sup>56</sup> It is not too clear just what is meant by the long-run demand curve;<sup>57</sup> but Clark states that, over some period of time, the demand curve will become more elastic because of possibilities of substitution and potential competition. A long-run demand curve, then, might be considered as an *ex ante* curve taking into consideration potential competition and substitution, as well as other factors such as force of habit, custom, and inertia, which would have no immediate repercussions following a price change, but which would, after some time, affect the prices at which certain quantities could be sold. Schumpeter's creative destruction depends upon much the same phenomena of substitution and potential competition, and Kaplan attributes much of the dynamism among large corporations to similar influences.

The assumption that the long-run demand adjustments operate to increase elasticity is debatable. At least, there are factors which can be assumed to work in the long run towards decreasing elasticity. It takes some time for brand preferences and recognition of product differentiations to become effective and thus reduce substitutability; buying habits are formed as well as broken over time; consumers may only gradually come to accept the real or claimed

<sup>56</sup> See Committee on Price Determination, National Bureau of Economic Research, *Cost Behavior and Price Policy*, pp. 80-115, 242-263, for a survey of these studies. Horizontal marginal cost functions, or close approximations thereto, were found in several cases. However, in discussing empirical derivation of long-run cost curves, the authors conclude that the investigator has no way of knowing when the firm is at a point of tangency between the long and short-run curves and when it is simply on another point of the short-run cost curve. Hence, even ignoring other grave statistical difficulties, there is no known way of ascertaining the long-run cost curve from historical data.

<sup>57</sup> "As we have seen, the reason why changes in supply conditions can only be made after a period of time has elapsed, is that technical factors prohibit instantaneous adjustment to changed demand conditions. But there is nothing on the demand side to correspond to this slow process of adjustment on the supply side. . . . There is no necessary reason why the long-run demand curve should differ from the short-run demand curve, however odd the behavior of supply has been" (A. W. Stonier and D. C. Hague, *A Textbook of Economic Theory*, London: Longmans, Green & Co., 1953, p. 152).

This comment evidently does not apply to a firm's demand for input factors. In the case of consumers' demand for final product, there will be some adjustments to a new price which become fully effective only after a lapse of time, but there is no sharp distinction between the short and the long run such as is provided by the concepts of variable and fixed costs. It should be further noted that the distinction between short-run and long-run cost curves is not dependent on calendar time, but rather on whether or not the plant size is permitted to vary.



merits of a product. In any event, the large firm is typically treated as making considerable advertising or other selling expenditures in order to maintain or improve its market position, and this may take the form of decreasing the elasticity of demand as well as of raising the entire demand curve.

It is difficult to understand how potential competition from either similar products or substitutes would prevent firms in an oligopolistic situation from exploiting their monopoly power. Assuming that other barriers to entry are surmountable, a potential entrant to an oligopolistic industry must consider not only his own costs and the prices prevailing at present (less, perhaps, the reduction necessary for the market to absorb his addition to output), but the costs of existing firms. The fact that monopoly profits are being made is not a decisive consideration for the entrant if existing firms can cut prices below his costs *after* he enters the industry. Recognition of mutual dependence and consideration of possible reactions by rivals should be attributed to potential as well as actual competitors in an oligopolistic situation; and when they are, the cost schedules of existing firms are seen to be of far more importance to potential entrants than the current levels of price and output. Potential entry, then, should serve far more as a stimulus to efficiency than a deterrent to monopoly pricing. Existing oligopolistic firms should not have to forego profits by actually adopting price and production policies which discourage entry if their capabilities of doing so are known. This is very likely the case in most concentrated industries which require a large capital investment to enter. The two most widely publicized cases of aggressive entry into concentrated industries, those which occurred in the cigarette industry during the 1930's and in the automotive industry in the postwar years, led to bankruptcy or unprofitable operation for many of the new entrants within a few years.

Assuming adequate information on all sides, the only cases in which agreements to restrict production and raise prices, without any change in market demand or cost functions, would appear to attract new entrants would be cases in which the newcomers could anticipate being included in the agreements, or in which their effect was negligible enough to be ignored by the combination. Both cases might serve to lower prices, but not to reasonably competitive levels. Information, however, may be imperfect and poten-

tial entrants may consider existing prices to be indications of the prices that they will receive; or so many individually insignificant firms may enter that the combination is unable to maintain its price umbrella. The possibility of a firm moving into the market until the agreement collapses and then getting out would seem to be a limited one in cases of industrial production, but it cannot be entirely ignored.<sup>58</sup>

Problems arising from differing conditions of entry into oligopolistic industries have been studied recently by J. S. Bain and P. Sylos Labini. Bain focused his attention primarily on the structure of the industry and on the attitudes of the existing firms acting either as a group under express or tacit collusion or with varying degrees of independence.<sup>59</sup> He has described underlying features of an industry which influence conditions of entry, has used these conditions to develop a classification of industries according to conditions of entry, and has examined twenty industries in terms of the criteria and classifications he developed. Bain's study is a combination of thorough taxonomy, thoughtful application of theory, and skilful use of highly relevant and painstakingly collected empirical data. Yet he puts far more stress on the relationship between price and entry than seems valid. He describes oligopolistic prices which would exist under conditions of "easy" entry, "ineffectively impeded" entry, "effectively impeded" entry, and "blockaded" entry.<sup>60</sup> The effects on price strategy which Bain derives from his conditions of entry follow logically from a definitional assumption which he makes explicit at the beginning of his study, namely that price policies to be considered are "persistent" ones which will be maintained over a period of five to ten years.<sup>61</sup> Yet it would seem that this assumption merely avoids the central problem of entry into an industry in which existing firms and potential entrants alike anticipate everyone else's reactions. If we assume that the firms in such an industry contemplate a persistent change in price policy and that new entrants can rely on this persistence, then certainly

<sup>58</sup> Such a possibility is suggested in W. A. Leeman, "The Limitations of Local Price-cutting as a Barrier to Entry," *Journal of Political Economy*, LXIV, no. 4 (Aug., 1956), 329-334.

<sup>59</sup> *Barriers to New Competition: Their Character and Consequences in Manufacturing Industries* (Cambridge, Mass.: Harvard University Press, 1956).

<sup>60</sup> *Ibid.*, pp. 21-22.

<sup>61</sup> *Ibid.*, p. 7.

an entry-barring price is important to oligopolists. But if this restrictive assumption is dropped, then the post-entry price, rather than the price existing while entry is contemplated, would be the important determinant for a potential entrant. Bain is aware of this possibility, but introduces it only near the middle of his book and then promptly rejects it, because he believes that a firm considering entry will probably interpret present price policies as a "statement of future intentions," indicating price policies that will exist after his entry.<sup>62</sup> One cannot quarrel with Bain's assumption as a device for developing his classification of entry conditions and their possible effects on price policy; but his belief that this assumption describes reality seems questionable, and his refusal to drop it at some point in his study makes his catalogue of alternative conditions in oligopolistic industries, while most useful, unfortunately incomplete.

In a 1958 journal article Franco Modigliani hails Bain's work and that of Sylos as together representing "a major breakthrough on the oligopoly front."<sup>63</sup> In the following discussion, reliance is necessarily placed on Modigliani's review of Sylos' book, which has been published only in its original Italian version. Modigliani notes that post-entry price is the relevant price for consideration by a potential entrant into an oligopolistic industry; and he comments that both authors use what he describes as the "Sylos postulate," which is that potential entrants behave as if they assume the "most unfavorable" consequence, namely that existing firms will maintain their quantity of production and accept the price fall necessary to absorb the newcomer's output.<sup>64</sup>

The Sylos postulate represents only one of many possible assumptions. It simply implies that the entrant regards a segment of the demand curve lying to the right of the present output as the demand facing him. This postulate is far from the least favorable assumption a potential entrant might make. If the present price is maintained only by collusion or recognition of mutual dependence, and the entrant upsets the restrictions on competition, price might fall by far more than the amount necessary to absorb his output, and the outputs of other firms might expand accordingly. In terms of

<sup>62</sup> *Ibid.*, p. 95.

<sup>63</sup> "New Developments on the Oligopoly Front," *Journal of Political Economy*, LXVI, no. 3 (June, 1958), 215-232, p. 215. The work reviewed, in addition to that of Bain, is Paolo Sylos Labini, *Oligopolio e Progresso Tecnico* (Milan: Guiffre, 1957).

<sup>64</sup> *Op. cit.*, p. 217.



Bain's analysis, the existing price policy might prove to be far from persistent. In a manner similar to that of Bain, Sylos is able to derive an entry-preventing price which the oligopolists will not exceed for fear of attracting new firms only by holding the degree of collusion constant. Such an assumption is implied in his explicit assumption that the expansion of output is limited to the entrant's production and that all other firms hold production constant.

Undoubtedly, Bain and Sylos have done pioneering work of a most valuable sort. They have thoroughly refuted the naïve belief that potential competition may keep prices near the competitive level. But Modigliani's "major breakthrough" must await developments in the theory of oligopoly designed to analyze the actions of a rational firm under more than one assumption as to rival's reactions. Such complex and difficult refinement, merely suggested above, is just as necessary for a thorough understanding of conditions of entry under oligopoly as it is to analysis of price and output policies.

Large size, even if it presupposes monopolistic power, may be advantageous in facilitating research. However, decided importance cannot be attached to other arguments that consumers may benefit from product differentiation and that, because of the flatness of long-run curves and potential competition, even the very large firm may not possess substantial monopolistic power. Such arguments, at least, do not lead to the conclusion that allocation of resources in an economy of business concentration will approximate that of a competitive system.

#### *E. Optimum Allocation and Alternative Social Goals: Employees, Stockholders, and National Defense*

Not all of the accomplishments claimed for big business have to do with consumer welfare. Emphasis has also been placed on improved working conditions, decline of the influence of stockholders, and contributions to the national defense.

The benefits to employees that have been granted by big business, which have been widely recognized, might be analyzed in terms of the hypothesis that since continuous operation and a high degree of stability and internal co-ordination are required in a firm with complex production processes and a large capital in-

vestment to protect, the marginal value product of labor is raised when the firm takes a long-run point of view. This may be particularly true in industries requiring specific and non-transferable job skills that take some time to master or necessitate a training period for new employees. In such industries firms may be willing to make a substantial outlay to encourage workforce stability and a low labor turnover rate. In many cases this long-run viewpoint may be concomitant with an oligopolistic situation, and in such cases the benefits achieved by employees would have to be weighed against possible exploitation of consumers.

Many large-scale industrial processes require extremely careful control of such factors as temperature, speed of reaction, pressure, quantity and timing of mixture, and meticulous attention to testing and sampling schedules and procedures. Also, industrial processes frequently involve joint products or by-products, and the main or subsidiary product of one stage is often the raw material of the next stage carried on in the same plant. A waste material at one stage, such as a gas, may be used in several other preceding or succeeding stages. Difficulties in any one process may disrupt operations or schedules throughout an entire plant. Many industrial processes require a continuous flow of gases or liquids, or a constant temperature, so that there may be great cost in starting up a process that has been shut down because of an accident or a strike. Work in such a plant involves highly specialized skills that must be developed over a number of years. It is of great importance to attract persons with a sense of responsibility and a desire to learn, to inculcate a sense of loyalty to the company in these people after they have been hired, and to retain their services after they have acquired the skill and experience of a senior operator.

This situation may be contrasted with that of a firm engaged in a simple process requiring little capital per worker. The time lost because of a strike, or in replacing an employee, may involve as much expense in terms of sales lost, relatively, as it would for a multi-product, capital intensive firm. But the pressure to resume production because of idle capital investment will not be so great in the simpler, labor-intensive company, and there may be little or no expense involved in shutting down operations and then starting them up again. If operations are simple, there may be insignificant

costs of training resulting from a high labor turnover. A firm in this situation would have little or no incentive to offer its employees generous benefits.

It is clearly not the case that all small firms have the characteristics of small capital investment per worker and simple operations; but a converse assumption would seem reasonable, namely, that as the size of a firm increases, it becomes more and more possible to achieve operating economies by increasing the number of final products, the complexity of the operations, and interrelations among productive processes. The fact that investment per worker increases with size, at least in the range of the corporate giants, is evidenced by the fact that in seeking to measure the relative importance of the largest fifty, one hundred, or two hundred industrial firms, the percentage of total productive assets held by the largest firms has always been greater than the percentage of the workforce employed by them. Further, there are evident economies of scale in employee relations. The larger the firm, the more easily it can absorb the costs of an adequately staffed personnel department or a full-time safety director. A small firm might have difficulty in justifying the expense of such undertakings even when it desired to improve the morale of its employees.

In theory, monopolistic power in its own right may be of benefit to labor even in the short run. Joan Robinson recognized this possibility in *The Economics of Imperfect Competition*, in commenting that labor might not benefit from the removal of monopolistic exploitation.<sup>65</sup> Under conditions of imperfect competition, the marginal value product of labor, which determines the wage, will be less for any quantity produced than the marginal physical product of labor valued at selling price of the product, given the size of the firm. Factor exploitation is defined as payment of less than the market value of the marginal physical product. However, labor might not benefit from a removal of this exploitation because, if the industry were converted to conditions of pure and perfect competition, the price of the product would fall. If demand for the industry's product was inelastic over this range, the total wage paid might also fall even though the new marginal value product of labor was equated with the marginal physical product

<sup>65</sup> *Op. cit.*, chap. xxv, "Monopolistic Exploitation of Labor," pp. 281-291.



valued at the new and lower selling price.<sup>66</sup> If labor or some other productive factor does benefit from a less than perfectly competitive industry structure, it is at the expense of the consumer.

In evaluating the benefits of big business to its employees, one must also consider the countervailing power created by the rise of large labor unions.<sup>67</sup> However, large firms are in many ways more capable than small ones of meeting union pressures, not only by wage increases and benefit plans paid out of monopoly gains, but also through devices such as safety programs, plant cafeterias, employee recreation programs, and more attractive working conditions which in many cases require the additional employment of full-time staff experts and administrators whose services could not be justified in a small concern.

If it is true that large firms are able to offer better working conditions than are the smaller ones and are more highly motivated to do so, then there should be evidence of relative workforce morale in the form of turnover rates varying inversely with the size of firms. Such data, however, are not available and would be questionable even if compiled, as extraneous factors such as the nature of the production operations and the location of the firm would also affect turnover rates.<sup>68</sup>

Comments are varied on both the actual and the proper roles of the modern corporation in respect to its stockholders. The character of stock ownership has changed. The influence of private capitalists has dwindled, and the controlling blocks of stock held by wealthy individuals or family groups are being dissipated under present schedules of personal income and inheritance taxation. Galbraith notes the declining influence of the investment bankers on corporate policy. However, in many instances the decline of the investment banker has been paralleled by the rise of large institutional creditors to a position of influence over corporate affairs.

<sup>66</sup> This would not necessarily be true if labor productivity increased as firms expanded to optimum size.

<sup>67</sup> See S. H. Slichter, *The American Economy: Its Problems and Prospects* (New York: Alfred A. Knopf, 1948). Slichter describes the American economy as "laboristic" in the sense that it is run more in the interests of employees than any other group (p. 7).

<sup>68</sup> For a discussion of the difficulties involved in comparing data among various industries in differing geographical areas, see the treatment of comparative wage structures by Arthur M. Ross, "The External Wage Structure," in G. W. Taylor and F. C. Pierson, *New Concepts in Wage Determination* (New York: McGraw-Hill, 1957), pp., 173-205.

A recent estimate showed 8,630,000 stockholders in the United States in 1956.<sup>69</sup> The stockholder of today is often described as being a small-scale investor, or perhaps speculator, with neither the interest nor the ability to participate in the control of his company. From this depiction, writers such as Knauth and Berle have drawn the conclusion that corporate managements typically direct their businesses without interference from the stockholders. Kaplan and Lilienthal recognize that the stockholder may exert influence on his company's affairs, but they regard the stockholders as only one of many groups who benefit from the corporation's activities.

The implication has been drawn that with the weakening of the stockholder's position there has been a concomitant weakening of the incentive for profits maximization. But the extent of the decline of the stockholder's power seems to have been exaggerated. Recent and current proxy battles, with attendant publicity, indicate the power of the stockholder's vote when sought by determined groups.<sup>70</sup> The institutional investors may exert significant pressure on corporate affairs, whether they actually hold large blocks of common stock or are simply considering the investment of new funds in either equity or debt securities. Finally, the small stockholder may place his proxy with an investment adviser or broker as well as with the management nominee, and he retains his ultimate power to sell his shares. Berle is incorrect in commenting that the small stockholder's one remaining right is that of collecting dividends. By selling, dissatisfied owners may not only depress the quoted market price of the stock, but may adversely affect other credit sources as well. Management has a real interest in preventing widespread dissatisfaction among small shareholders.

The most serious problem to be faced as a result of assumed managerial autonomy is that of unjustified business expansion, or continued operation under conditions in which a profit-maximizing firm should either reduce its activities or dissolve.<sup>71</sup>

<sup>69</sup> New York Stock Exchange, *Who Owns American Business? 1956 Census of Shareowners*, Dept. of Public Relations and Market Development, p. 10. The techniques used for eliminating duplications in this survey follow those described by L. H. Kimmel in his earlier study, *Share Ownership in the United States* (Washington: Brookings Institution, 1952).

<sup>70</sup> For an account of several of these challenges to management, see David Karr, *Fight for Control* (New York: Ballantine Books, 1956).

<sup>71</sup> In the strictest sense, liquidating dividends should be paid out as long as the cash value of these dividends exceeds the present discounted value of the earn-

A rational organization, concerned with maximizing its own profits, would adopt the following principles in respect to expansion. First, earnings should be retained in the organization as long as the expected rate of return on such reinvested earnings is greater than or equal to the rate of return which can be gained by investing the funds in other organizations with similar risk characteristics. Hence the marginal rate of return on internally reinvested funds should equal the rate of return available outside of the organization. Second, new equity securities should be issued only so long as earnings per share on existing outstanding stock are increased or held constant by the new capital brought in. In this fashion, the rate of return on owners' equity would be maximized, reflecting the directors' obligation to act in the best interests of the stockholders. Third, debt should be incurred up to the point where the marginal rate of interest paid out just equals the marginal rate of earnings of the assets acquired by debt financing.<sup>72</sup>

The most profitable size determined by application of these principles would not be directly affected by distribution of profits among, say, stockholders in the form of dividends and management in the form of excessive salaries.<sup>73</sup>

Virtually every writer in the field of corporation finance who discusses business expansion notes that the motives for such expansion may be other than increased profits. The most commonly cited incentives to expansion are prestige, desire to increase power, some type of creative instinct, and the hope of higher executive

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ings stream which would be generated by the funds if left in the business. Perhaps this is too rigorous a requirement to impose upon a model of the business organization, as such a policy may conflict with organizational survival.

<sup>72</sup> The assumption is made here that the firm's borrowing is not limited by the availability of funds. After refined study of maximizing models, F. A. Lutz and Vera Lutz conclude, "It seems appropriate to suppose that the entrepreneur should aim at maximizing the rate of return  $k$  on his own capital over the whole period for which he expects that capital to be available for investment. Provided he have unrestricted access to the market for borrowed funds, the optimum *scale* of investment for any given technique, or, that is, the scale which maximizes  $k$ , will also be that which maximizes  $V - C$ ," where  $V$  stands for total revenue and  $C$  for total cost. (*The Theory of Investment of the Firm*, Princeton, Princeton University Press, 1951, p. 42).

<sup>73</sup> Clearly, these principles are not simple to apply in a dynamic world where estimated earnings are subject to a wide margin of error. Further, these principles are of only slight relevance to determination of the optimum capital structure of a firm. However, the rate of interest which a firm must pay for new funds may be influenced by its policies respecting distribution of profits.



compensation resulting from the expanded responsibilities involved in managing a larger organization.<sup>74</sup> Taking the individual executive as a focal point, the motives for expansion may be distinguished as pecuniary and non-pecuniary.<sup>75</sup> The latter would appear to be the greater cause for concern. A management and director group inspired with visions of greater personal power and prestige may very well succeed in carrying out an expansion program opposed to maximum profits through control of proxy machinery, optimistic if not deliberately misleading predictions, and control over dividend policy.

Thus, the application of partial equilibrium analysis may not always be a suitable procedure in making predictions as to size. However, there are important institutional features which indicate that a firm will not diverge too significantly from its own economically optimum size.

Expansion may be financed internally through retained earnings. Such expansion is, from the viewpoint of the corporation, the most desirable type, other things being equal, as it avoids a complex capital structure, additional interest charges, and changes in the relative voting and investment positions of its existing stockholders.

Obviously, the desire to utilize retained earnings for expansion encourages rational, profit-maximizing behavior in the day-to-day operations of the firm. The possibility of a loss of earnings serves further as a check against expansion which is too rapid or too extensive, even though the goal of management is assumed to be eventual domination over the largest possible industrial empire. To the extent that retained earnings are the source of funds for desired expansion, profits maximization is essentially a complementary rather than a competing goal.

<sup>74</sup> See, for example, the following: H. G. Guthmann and H. E. Dougall, *Corporate Financial Policy* (2nd ed.; New York: Prentice-Hall, Inc., 1948), pp. 481-482; W. B. Taylor, *Financial Policies of Business Enterprise* (2nd ed.; New York: Appleton-Century-Crofts, Inc., 1956), pp. 583-585; H. L. Purdy, M. L. Lindahl, and W. A. Carter, *Corporate Concentration and Public Policy* (2nd ed.; New York: Prentice-Hall, Inc., 1950), pp. 99, 103-105; A. S. Dewing, *The Financial Policy of Corporations* (5th ed.; New York: Ronald Press, 1953), II, 812-814.

<sup>75</sup> By "non-pecuniary" motives are meant desires for goals other than maximization of the individual's monetary income. These motives are assumed to lead to behavior which is rationally designed to achieve non-monetary goals. Such behavior is more closely analogous to consumers' rationality than to producers' rationality. There is no intention to assume that the behavior arising from non-pecuniary motives is irrational or to become concerned here with any type of irrational behavior.

If outside financing is resorted to in order to expand, the firm will either offer securities for cash and other assets, or it will offer to exchange its securities for those of firms whose assets it is acquiring. Here again, despite the motives behind the expansion, earnings provide a significant check to unjustified growth. If earnings per share fall, the quoted price of the common stock outstanding will presumably decline, and in all probability the market prices of preferred stock as well will drop. The lower the price of the stock, or the lower the rate at which it can be exchanged for the securities of other corporations, the more difficult any additional equity financing becomes, particularly if existing stockholders must approve any additional issuance of securities. Similarly, debt financing which promises to reduce earnings, particularly times charges earned, will be ever more costly in terms of interest charges, notably if the firm's most recent expansion has already weakened its earnings position. Further, since the collective prestige of management is enhanced by high and rising stock prices and by an excellent credit rating for the firm, the non-pecuniary drive for expansion will be directly opposed by similarly non-pecuniary considerations of managerial reputation, even when profits maximization is not a paramount objective of its management.

The motives stimulating management to expand the firm beyond its most profitable size may be pecuniary. Where executive compensation or any wage payment is concerned, the portion above that which an individual's services would command as a separate contribution made from outside of any business organization may be treated as profit.<sup>76</sup> Since executive compensation in excess of the value of services performed separately from the organization must come out of profits, there is a limit on expansion derived from pecuniary motives. The executives must weigh their increased ability to rationalize a demand for a higher share of profits against lower total profits available for distribution when expansion proceeds beyond the maximal size. The size at which executives' total compensation, including profits, is maximized may not diverge substantially from the size at which total profits are maximized.

<sup>76</sup> This concept is not the same as compensation above opportunity cost, since the latter contemplates the compensation of an individual within the next most favorable organization as well as outside of any business organization, say as an independent consultant. However there does not appear to be any significance other than definitional to the distinction in terms of the present analysis.

Empirically, the existence of substantial excessive executive compensation throughout the big business sector of the American economy today is doubtful. One piece of evidence to this effect is the fact that many large firms are complaining of a shortage of personnel talented enough to operate efficiently in high executive posts.<sup>77</sup> Such complaints, coming in the main from those who have already attained high executive positions, must be taken with a modicum of scepticism. However, when one considers the tensions under which the modern executive works, the number of hours per week devoted to business, the intellectual and social skills required, the incidence of occupational diseases such as ulcers, nervous breakdowns, or alcoholism, and current personal income tax rates, the conclusion seems reasonable that executive compensation in the top levels of modern large corporations is not exorbitant.<sup>78</sup>

A final check both on excessive executive compensation and on unwise expansion is found in the legal system within which the business corporation operates in the United States.<sup>79</sup> Typically, the board of directors or a committee thereof sets the level of compensation for the chief officers. Chief officers are defined in the laws of most states as the president, vice-presidents, treasurer, and secretary, and, less frequently, the comptroller and assistant vice-presidents, treasurers, and secretaries in addition. Total compensation of the chief officers must be reported in any prospectus subject to regulation by the Securities and Exchange Commission. The relation of the directors to the corporation and to its stockholders has been summarized, with appropriate legal citations, as follows:

<sup>77</sup> See, for example, Standard Oil Company (New Jersey), *Annual Meeting, June 8, 1951*, pp. 17-29. On page 20, a proposed executive stock option plan was defended as essential to retain those "few that have that extra amount of 'oomph' or touch of genius, if you will, on which this Company has depended for its unusual success over the years."

<sup>78</sup> In 1950 disposable income per employed person was 196% of the comparable figure for 1929. Executive earnings after taxes, however, were only 80% of their 1929 figure in 1950 (David R. Roberts, "A General Theory of Executive Compensation Based on Statistically Tested Propositions," *Quarterly Journal of Economics*, LXX, no. 2, May, 1956, 270-294). Roberts found that executive compensation is related more to the size of a firm than to its profitability. His findings, he concluded, are consistent with the theoretical results of bargaining in a bilateral monopoly case, if we include the profits attributable to innovation as a return to managerial services.

<sup>79</sup> The following discussion of corporate law is derived from Prentice-Hall, *Corporation Course* (New York: Prentice-Hall, Inc., 1953), with loose-leaf supplements.



The directors must direct. . . .

The directors must render to the corporation a conscientious consideration of every question involving the interests of the company. They must act in good faith and with reasonable care. They must use that prudence in the handlings of the affairs of the corporation that an ordinary prudent man would use. The directors must use their powers for the benefit of all the stockholders, not for the benefit of only a few. Directors occupy a position of trust and confidence and are considered in the law as standing in a fiduciary relation to the stockholders and as trustees for them. They must represent fully the interests of the corporation of which they are directors, and must not use their positions of trust and confidence to further their private ends.<sup>80</sup>

Any individual director may be sued for negligence, mismanagement, fraud, or breach of trust, either by the corporation or through a derivative action brought by one or more stockholders.

Directors' proposals for expansion are subject to more direct checks by the stockholders. The directors may issue capital stock which is authorized in the corporate charter but as yet unissued, and the stockholders do not normally have any legal control over such an offering.<sup>81</sup> Further, in many states the directors may incur long-term debt without prior approval of the stockholders. However, a corporation doing business in any state may be required to conform to the law of that state in regard to any property domiciled therein. Therefore, it is customary to secure approval of the stockholders for any issuance of securities designed to acquire property in a state or states whose charters specify such approval, even though the corporation's own charter and by-laws do not so require. In some states, stockholder approval is required before any corporate property may be subjected to mortgage. If authorized stock is fully issued, any further stock issuance requires an amendment of the charter which must be approved by the stockholders. Finally, any merger or consolidation with another firm, or the sale of all of the corporation's property to another firm, requires stockholder approval. Thus, the directors must fear, in addition to proxy fights and other stockholder efforts to unseat them, the possibility that their proposals will be rejected by the stockholders if they cannot present convincing justifications on profit-maximizing grounds. To

<sup>80</sup> *Ibid.*, pp. 1511-1513.

<sup>81</sup> *Ibid.*, pp. 2148-2156 discusses the troublesome question of pre-emptive rights.

the extent that shares are held by institutions or voted by financial advisers, such a possibility increases.

A final major issue is the reliance placed on big business for national defense and war production. A period of national defense can no longer be dismissed as temporary or abnormal. Even in periods in which armaments production is low and the military forces reduced in strength, research and the development and testing of new weapons will continue; and for an unpredictable time in the future, the nation's industrial capacity must be capable of rapid conversion.

Walter Adams and Horace Gray have suggested an economic rationale for the acceptance of seemingly unprofitable defense contracts.<sup>62</sup> Firms which patent processes growing out of research done under contract for the Atomic Energy Commission must license these patents royalty-free to the government and are subject to compulsory licensing. Nevertheless, Adams and Gray believe that a few chosen firms, by supplying research teams and by operating government facilities, are getting extremely valuable experience and privileged access to technical knowledge. Such experience and knowledge may give great competitive advantages when atomic technology is applied to industrial and commercial purposes.

Therefore, it may well be to the advantage of a profit-oriented firm to accept or even solicit government contracts which make large demands on its research facilities even though the company's claim is perfectly true that these contracts, in and of themselves, are not particularly profitable. Further, the long-run cost to the government and eventually to the public may be larger than it first appears.

It was proposed above that monopolistic market positions might be tolerated where they were integral parts of a competitive research system. No similar arguments can be made in the case of defense contracts. If the government wants research done, the funds will be forthcoming; and although the prospect of monopoly revenues might be essential to the stimulation of private research, the government's incentive for fostering research is certainly not commercial profit.

The fact that much research must be done on a large scale does

<sup>62</sup> *Op. cit.*, p. 148.

not necessarily imply that the government must rely on large private firms for research necessary to the maintenance of national defense. Experience during the Second World War demonstrated that functioning organizations can be established rapidly under pressure. The argument that a giant firm should be immune from antitrust prosecution on the grounds that it is essential to national defense must be regarded as invalid, as there do not seem to be insuperable obstacles to the government's establishing its own research facilities and recruiting and welding together a new organization when necessary.

E. S. Mason has recently noted one very real advantage that may result from present practices of contracting defense projects to private firms rather than carrying out the projects within governmental organizations. Private industry is not subject to the detailed supervision that would be imposed upon a public corporation. "And government," Mason observes, "takes advantage of the independence and flexibility of the private corporation to contract out the performance of what are essentially public services."<sup>83</sup> Mason's observation is undoubtedly valid, yet it provides no support to the contention that the antitrust philosophy conflicts with the nation's defense needs. The smaller the private firm, the more flexible it should be. A given department of a giant corporation can typically exercise little real independence in the actual performance of work done under a Government contract. The government cannot abdicate to private enterprise its ultimate responsibility for co-ordination of various projects. Indeed, the necessary flexibility and freedom may be provided only through the establishment of private organizations, such as the RAND Corporation, whose sole or primary function is service to the defense agencies and which do not regard defense work as an adjunct to private business carried out in concentrated civilian markets.

In considering defense requirements, we must drop the goal of maximizing material welfare. The essence of defense spending is a diversion of economic effort from productive civilian uses to military uses which do not provide goods and services for consumer enjoyment. Thus, in defense spending, one of the major justifications for free competition is no longer relevant. Defense

<sup>83</sup> E. S. Mason, ed., *The Corporation in Modern Society* (Cambridge, Mass.: Harvard University Press, 1960), p. 17.



expenditures may be important in providing full employment; but even where such expenditures are appropriate to fiscal policy, there is no basis in consumer welfare for arguing that the market for military goods be made competitive.

Further, it would be hard or impossible to describe the government's demand function for military goods. The factor misallocating resources in the theory of imperfect or monopolistic competition is the downward sloping demand curve facing each firm. Yet it seems highly unreasonable to assume that the defense authorities would plan on buying so many jet planes if they could obtain them at a certain price, and so many more if the price were lowered a given amount. Rather, these authorities might be considered as having certain materiel requirements and the power to compel private firms to accept defense orders on equitable terms. In peacetime the compulsion may be exercised by the force of public opinion, the bargaining power of the government, and its capabilities of either constructing its own plants or financing the construction of new competitive plants. In wartime, direct allocations and priorities, and the power of seizure, would be added to the government's economic arsenal. The nature of the government's demand, and the political power it possesses, put it in a stronger position vis-a-vis private industry than that of a private monopsonist and make it impossible to treat the case by standard partial equilibrium methods. Economic considerations would be subordinated to military needs in time of war or national emergency.

Partial equilibrium theory, therefore, cannot supply norms for defense production and seems inapplicable to defense problems. All that can be asked of an economist concerned with public policy towards big business is that he consider defense requirements before urging a course of action designed to promote consumer welfare. Yet one cannot help questioning the need for unified "teams" such as the one composed of A. T. & T., the Bell Laboratories, and Western Electric.

#### *F. Two Prerequisites for Economic Analysis in the New Competition*

In a recent article E. S. Mason has taken a searching look at the implications of the concepts of the modern corporation posed by the

current defenders of giant business.<sup>84</sup> He notes that, as managers have increased their control and have reduced limitations on their functions, and as management has evolved into a skilled profession, it is now reasonable to describe American capitalism as "managerial." The defenders of big business, he continues, uniformly emphasize the role of management in their analyses. A standard feature of the new literature on corporate management is the statement that management recognizes broad responsibilities not only to stockholders, but to employees, customers, the public, and, sometimes, suppliers. However, the literature is divided on how management's responsibility is enforced, or if it is indeed subject to any outside restraints. Thus, Berle emphasizes public opinion, Galbraith stresses countervailing power, and others rely merely on the moral principles of the managerial class. Facetiously, perhaps, Mason notes that very recent British socialist literature has taken much the same line as the American apologists towards the management function; and he asks why, if the claims are valid, management cannot operate just as efficiently under public ownership and why the stockholders are entitled to anything other than an interest payment plus a very small risk premium.

The positive contribution of the managerial literature, according to Mason, is that it "appears devastatingly to undermine the intellectual presuppositions" of classical economics and therefore the system of economic liberty justified by these presuppositions. Yet, according to Mason, the managerialists offer little in replacement:

The beneficent working of the free-enterprise system assumed a continuous striving for maximum profits on the part of the owner-controllers of individual firms, a structure of markets sufficiently competitive to constrain the power of a single firm to influence wages and profits within narrow limits, and the capacity of consumers to maximize their satisfactions from the expenditure of their income through the exercise of consumer's choice (consumer's sovereignty). The managerial philosophy puts in doubt all three of these critical assumptions.<sup>85</sup>

On the first assumption, Mason comments that the managerial literature is vague and confused as to norms and guideposts to

<sup>84</sup> "The Apologetics of 'Managerialism,'" *Journal of Business of the University of Chicago*, XXXI, no. 1 (Jan. 1958), 1-11.

<sup>85</sup> *Ibid.*, p. 6.

corporate behavior. Even assuming that the large firms dominating an economy are all controlled by managers who want to make a maximum contribution to society as well as do the right thing by employees, customers, suppliers, and stockholders, he doubts that the corporate conscience could supply effective criteria. These objectives conflict; and in the absence of profits maximization as a rule of behavior, there is no satisfactory method of determining the socially "right" wages, prices, levels of output, and resource allocation.

In regard to the second assumption, Mason observes that managerial writers are not in agreement as to what, if any, substitutes the "new competition" of big business" offers for the older concept of a competitive market structure. Some stress a Schumpeterian concept of dynamic competition in innovation, others "rejoice in the disappearance of competition in favor of industry planning,"<sup>86</sup> and others believe that concentrated industry can and ought to be workably competitive. Yet, Mason concludes, the managerialists have only begun to face real problems such as the relation between optimum size for innovation and optimum size for market competition, whether private power should be limited for the public good even if some efficiency is thereby sacrificed, why countervailing power does not lead to a simple sharing of monopoly gains, and how the corporate conscience operates to the public benefit.

Mason, turning to his third assumption, notes that in addition to supplying products, the managerial system devotes great amounts of time and talent to creating and manipulating demand. To the extent that the system succeeds in this attempt, human wants can be increased or decreased as the producers see fit. As a result of the destruction of consumer sovereignty, Mason believes, there is little that economists can do to supply an effective ideology for the managerial economy. Psychologists, sociologists and, perhaps, political scientists will be required. "It is high time," Mason concludes, "they were called to their job."<sup>87</sup>

However, if economists are to contribute anything to an understanding of a big business society and are to offer any useful pro-

<sup>86</sup> *Ibid.*, p. 8.

<sup>87</sup> *Ibid.*, p. 11.



posals for public policy towards corporate concentration, they must address themselves to Mason's first two problem areas.

There are two types of neglect which seem to have been most important in imparting the sense of confusion and conflict noted by Mason to the managerial literature. First, writers have sometimes failed to state explicitly the social goals that they desire public policy to promote in its regulation of business activity; and subsequent writers drawing on someone else's work or criticizing it have often failed to note these underlying objectives even in cases where the original writers have stated them explicitly. Second, the words "competition" and "monopoly" have come to bear several connotations, and a writer cannot be understood unless his use of these words is seen by the reader to be consistent with explicit or implicit references to the situations to which the words are being applied.

In regard to the first point, economic theory has concerned itself traditionally with production and distribution as primary elements of the basic problem of utilizing scarce resources in the manner optimal to consumer welfare. Static economic theory has addressed itself to one phase of this problem, that of allocating existing resources in such a way as best to satisfy present wants by the most efficient known productive processes. Attempts to formulate a dynamic theory involve relaxation of these conditions so as to consider the development of new resources or the depletion of existing ones, changes in consumers' wants, and technological development. Under the static conditions, pure and perfect competition is regarded as the allocative mechanism best suited to the goal of maximization of consumer welfare, but problems have been noted when dynamic aspects of this goal are considered. Competition may be wasteful of natural resources, consumers' enjoyment of commodities may be stimulated by advertising and forms of product differentiation associated with monopolistic competition, and large size with concomitant market power may be most conducive to technological advance.

Thus, there are several aspects to the goal of maximum consumer welfare. Further, other goals of the economic system have been considered such as its ability to contribute to national defense and its amenability to wartime mobilization, its relationship to non-economic political and social ideals of a democratic state,

and its treatment of individuals in their roles as employees or contributors of other resources rather than as consumers.

Many of these goals can be comprehended by existing techniques of economic theory. If we assumed, for example, the rate at which future income is discounted by a firm and if we could assume that research is carried on so extensively that its costs and returns could be estimated upon a basis of statistical probability, then we could build a model in which the return on the marginal dollar devoted to research is equated to that devoted to each other productive activity;<sup>88</sup> and if we further possessed knowledge of consumers' degree of preference for present over future enjoyment, we could make some evaluation by formal methods of the social performance of this firm in diverting resources from current uses to research. Similarly, with enough assumptions as to individuals' preference functions, we could compare their satisfactions, say, as employees in large firms regarding stable, highly-trained labor forces as necessary costs with the satisfactions obtained by consumers buying from a highly competitive industry. But, as suggested earlier, economic theory cannot as yet make quantitative comparative analyses of these types which could be applied to a given industrial structure for public policy purposes. Also, certain of the goals described in the literature, such as the preservation of traditional democratic social and political relationships and the existence of a strong military defense establishment, cannot be treated even conceptually within the theoretical framework of consumer preference and price and production equilibrium. All that can be asked, at present, is that every writer advocating a certain line of public policy towards big business specify precisely the social objectives that he expects this policy to promote, so that the reader may compare these goals with alternatives which may exist in his own mind.

If this explicit statement of goals were universally made and noted by readers, much of the disagreement as to appropriate public policy towards industrial concentration would be seen to involve conflicting goals rather than the techniques of economic analysis.

<sup>88</sup> A suggestion for the technique that could be used to construct such a model is given in Norman S. Buchanan, *The Economics of Corporate Enterprise* (New York: Henry Holt & Co., 1940), pp. 234-241, in which the author discusses the applicability of marginal analysis to the problem of retention of earnings and dividend payments.

As examples of this point, both Schumpeter and Galbraith noted that their concepts of creative destruction and countervailing power are not inconsistent with partial equilibrium theory.

Schumpeter observed that the work of Robinson and Chamberlin had led many economists to believe that an imperfectly or monopolistically competitive economy functioned badly in that equilibrium under other than perfectly competitive conditions failed to assure full employment or optimum allocation of resources. He stated that these conclusions as to malfunctioning were almost completely false. "Yet," he continued, "they follow from observations and theorems that are almost completely true."<sup>89</sup> The conclusions were false not because unemployment and misallocation did not exist in a capitalist economy, but because the goals of full employment and optimum allocation were not as important for Schumpeter as the results of creative destruction, innovation, and expanding production brought about by the dynamics of the capitalistic process. Schumpeter defined his own goals quite clearly, and he made specific attacks on the goals of full employment and optimum allocation of resources. Unemployment, he stated, is not an important problem if the society can take adequate care of its unemployed; and optimum allocation of resources at any one time is trivial when contrasted to the dynamic competition of new techniques and substitutes which exerts great force in the actual capitalistic economy.

Similarly, Galbraith observed that the price and production policies of firms in oligopolistic or imperfectly competitive situations are well described by the theories of Robinson and Chamberlin. Yet in proposing his theory of countervailing power, Galbraith argued that economists have been obsessed with efficiency and optimum allocation, but that neither of these goals is of paramount importance in a nation as "opulent" as the United States.<sup>90</sup>

Thus the views towards public policy held by Schumpeter and Galbraith diverge from those of George Stocking and Corwin Edwards, for example, primarily because different goals are stressed rather than because some writers regard the theoretical framework of others as incorrect.

<sup>89</sup> *Capitalism, Socialism, and Democracy*, p. 82.

<sup>90</sup> *American Capitalism: The Concept of Countervailing Power*, chap. viii, "The Unseemly Economics of Opulence," pp. 103-113.



Clear statements of goals will not remove controversy. A student who holds technological advance and research to be of greater importance than allocation of existing resources in a certain industry might advocate a policy permitting a high degree of concentration whereas another, concerned with problems of social or political power, might urge dissolution of dominant firms in the same industry even though he regarded its economic performance as perfectly satisfactory. No acceptable method has yet been suggested for obtaining an objective comparison of the social effectiveness of diverse goals. There is no a priori reason why the basic goals set by an economist should be given any more weight than those set by other informed persons interested in the behavior of big business, such as military leaders, lawyers, political scientists, government administrators, labor leaders, or even businessmen themselves. However, economic analysis is most useful in describing effective public action once the objectives are specified.

The second major reform recommended is definite reference to the conditions being described whenever the words "competition" and "monopoly" are used.

In the economic sense, competition does not connote struggle with a specified opponent or opponents. Under the assumptions of pure and perfect competition the firm recognizes no specific competitors with whom it must strive. Rather, competition is regarded as the absence of control by the firm over the external situation which it faces and its subjection to impersonal external economic forces. Conversely, monopoly is regarded as a degree of control over some element of the firm's environment and the freedom to choose among alternative courses of action. Under pure and perfect price competition, for example, the firm is faced with a price set by the market and it produces a quantity which will maximize its profits without possessing any ability to influence the price. Whenever a firm can influence the price of its product by the amount that it offers on the market and is aware of this fact, it possesses a degree of monopolistic power over price. The concepts of competition as the absence of power or control and of monopoly as the degree of power or control possessed are well understood by economists and used consistently in the literature. The problem is not one of definition, but of reference.

Presumably, competition, in which the actions of individual firms are restrained by impersonal forces, is to be preferred to monopoly in most situations in a free-enterprise economy. Yet specifying the type of monopoly being examined should force the writer to analyze the effects that he expects to follow from a given monopolistic position and to note both the monopolistic and competitive aspects of any firm or industry before proposing remedial public action.

When dynamic features of an organization and aspects of its activities which are not oriented towards product markets become significant, a simple comparison of the firm's price and production equilibrium with the competitive norm no longer suffices as the single criterion for judgment of the firm's social performance. Elements of monopolistic power in labor, capital or supply markets, or in research, may be as important as a firm's position in product markets. A profit-oriented organization can be expected to exploit all positions of monopolistic power as fully as it can.

Thus, in studying different firms, different dimensions of monopoly are important. For example, testimony before the Industrial Commission from 1899 to 1901 indicated quite clearly that a major motive behind the trust movement was the desire to achieve control of specific industries in order to control production and raise prices in identifiable markets. The two great industrial organizations dissolved in 1911 had, in the judgment of the Supreme Court, achieved undue monopolistic power in the markets for petroleum and tobacco products. In these cases there were identifiable markets both in the supplies of raw materials and the sales of final products. The important legal and social issue was clearly monopolistic control of markets. The problems posed for public policy by the existence of organizations such as the old Standard Oil and American Tobacco companies, or perhaps the Aluminum Company of America prior to Judge Hand's decision, are in many respects different from those posed by other giant firms—for instance, Du Pont, a diversified company with monopolistic power in some product markets and substantial competition in others. The issue of market power is not as essential to an evaluation of Du Pont's social performance as it was in the cases of Standard Oil, American Tobacco, or Alcoa. But Du Pont's power in other areas, such as supply of raw materials, patents, and finance, coupled with

its positions of market power, must be weighed against the magnitude of the firm's activities in the highly competitive field of research. Similarly, product competition appears to be vigorous in the automotive field, with three major producers, a few minor ones, and thousands of used car outlets. Yet the size of the General Motors Corporation and its vast powers in non-market areas create social problems despite workable competition in the sale of automobiles. An economic approach to the social problems raised by the large size of business organizations, whether market monopoly or conglomerate power, can be given unity and coherence only by recognizing that there are aspects to the monopoly problem other than power over price in product markets.

It must be recognized, also, that the positions of monopolistic power or competition in different areas may be closely related. For example, monopolistic product markets may be essential to a company's research in two ways: first, the research may not be justifiable by a profits test unless the firm expects to exploit monopolistic positions when research leads to saleable goods, including licenses to use patents; and second, the revenue from market monopolies may be necessary to support the research. Along this same line, it has been suggested frequently that monopolistic conditions might hinder the introduction of new techniques and products. The author of the following passage is clearly referring to both market and patent monopolies:

We are thus faced with an economic dilemma. Patents and monopolistic position are essential ingredients in providing financial support and incentives for large-scale research on and development of complex new products. A research-minded company has to work exceedingly hard during the rapid growth period of a new art to build up a watertight patent structure. Having done so, it is not consistent with normal economic motivation for it to throw away the advantages of the monopoly by forcing a very rapid rate of obsolescence.<sup>91</sup>

L. B. Schwartz, in his dissent to the Attorney-General's Committee's *Report*, cites still another example, in this case one in which one monopolistic position fortifies another. "Where a dominant company begins to require its distributors to deal exclusively with

<sup>91</sup> W. R. MacLaurin, "Innovation and Capital Formation in Some American Industries," Universities-National Bureau Committee for Economic Research, *Capital Formation and Economic Growth* (Princeton: Princeton University Press, 1955), p. 562.



it," Schwartz notes, "I would strike the practice down without waiting for the company to sign up so many distributors that competitors experience difficulty reaching the consumer market."<sup>92</sup> In this case, a firm is described as using its power over distributors, presumably based on the fact that no distributor could survive without supplies from the dominant firm, to achieve a monopolistic position in its product market or to extend its power over consumers.

Market power, the narrow definition of monopoly, is therefore seen to be only one factor, albeit an important one, in assessing the monopolistic position of a giant firm. Yet virtually all of the benefits claimed for big business depend upon the existence of competition somewhere in the firm's environment; or, in the absence of competition, they no longer appear as virtues. It has been claimed that only giant firms, with great financial resources and the ability to sustain heavy losses, can support research and development programs in which only one of many investigations may prove profitable. Such research, proponents of big business observe, is essential to the high and rising standard of living that the United States enjoys at present. However, research in certain areas may be monopolized, or it may be used to promote monopolistic power elsewhere: research can contribute most where it remains highly competitive. Big business has also been credited with improving wages and conditions of work for its employees. Such behavior was found to be consistent with profits maximization where a long-run view was taken and in cases involving heavy capital investment per employee, continuous processes, specialized labor requirements, and a *competitive* labor market. The government, it has been claimed, must rely upon big business for national defense. This argument has been rejected on the grounds that the government itself can undertake much of the organizational burden directly or through coordination of contracts, and that such governmental activity is appropriate in a free-enterprise society because the nature and level of defense spending cannot be set by market forces. Through decentralization, big business may give more individuals an opportunity for responsible careers and may sacrifice some of the power concomitant with size. Yet decentralization is presumably undertaken only in order to increase profits as size makes central

<sup>92</sup> *Op. cit.*, p. 57.

control unwieldy and is certainly not a close substitute for competition. Finally, it has been suggested that the modern corporation is sensitive to public opinion, or possesses a conscience. It may very well be that decision-makers, loyal to a company, imbue that company with ideals and ethics which they might not follow too closely if they were concerned simply with their own personal gain; but presumably much of the sensitivity to public opinion arises from competitive efforts to attract and maintain large bodies of customers and to avoid unfavorable public action.

On the other hand, definitions of competition and monopoly which are restricted to product markets obscure the valid criticisms against big business. A monopolistic position in a product market leads to a misallocation of resources and may be condemned on this ground alone only in the absence of closely related and significant factors. Such a monopoly might, on the one hand, support a desirable research program; or, on the other, it might generate the funds being used to dominate supply markets or acquire fencing patents. A monopoly in the market for tobacco products might have an entirely different significance from one in the plastics market. Conversely, a giant firm might have no significant power in any product market, perhaps because of the competition of close substitutes, and yet be performing very badly, in a social sense, because of monopolistic power over suppliers, labor, or credit sources. This is the problem which Corwin Edwards has treated under his concept of conglomerate power. Despite Edwards' treatment of this concept of big business as something distinct from monopoly and competition, it is an integral part of any over-all assessment of an organization's power and, hence, its market behavior.

We must conclude that economics can make a useful contribution to antitrust enforcement only when it is recognized that the goals of such enforcement must be specified. Further, the preservation of a competitive economic system involves the analysis of several aspects of competition and monopoly. When these facts are accepted, many seeming contradictions in the literature can be resolved.

## Chapter Six: THE MODERN CORPORATION AND PUBLIC POLICY: THE ORGANIZA- TIONAL APPROACH

### A. *Organizational Theory as an Alternative to the Traditional Economic Approach*

Perhaps at present no one is particularly concerned over whether giant businesses are natural growths or not, but J. B. Clark's dictum that we need to know more about the trust than that it resembles an octopus retains all of its vitality today. C. I. Barnard, R. A. Gordon, and Peter Drucker have each stated this need and sought to deal directly with certain aspects of the modern corporation as an organizational form.

In a 1938 book, *The Functions of the Executive*,<sup>1</sup> Barnard urged the need for a theory of the formal organization. He felt that the functions of modern business organizations had not been properly studied and could not be without an adequate theory. Economic theory, according to Barnard, gave insufficient attention to human motives and gave a distorted view of social behavior by stressing its pecuniary aspects. The economic approach was incapable of viewing interrelationships within an organization and among the individuals comprising it and was incapable of describing the actions that resulted from these interrelationships.

Formal organizations,<sup>2</sup> Barnard held, were created and maintained because organizations could achieve objectives which would be unattainable by individuals working independently of each other. The purpose of an industrial organization could never be profits, although the prospect of profits was necessary to attract investors. Rather, the purpose was the production of goods or services, and

<sup>1</sup> Cambridge, Mass.: Harvard University Press.

<sup>2</sup> The definition of a formal organization which is presented in this book is: "A system of consciously coordinated activities or forces of two or more persons" (*ibid.*, p. 81).



this purpose had to be achieved in such a way as to satisfy the motives of other members, such as workers and customers.

In 1948 Barnard published a collection of his writings and lectures under the title, *Organization and Management*.<sup>3</sup> Many of the points made in his earlier book were repeated, but in the preface one can sense a new urgency of the need for a science of organization. Barnard saw a decline in faith in the automatic operation of free, autonomic, but interdependent organizations, and a subsequent trend towards reliance on social planning. "Adam Smith's 'unseen hand' seems more and more incredible—and discreditable."<sup>4</sup> He felt that an understanding of the nature of organizations would highlight the difficulties of planning and the fact that results often differed widely from purposes.<sup>5</sup>

In one chapter, he commented:

Let me repeat. The confusion on this matter generally will arise from the fact that we are "economically" minded, not "organizationally" minded. Our views of what occurs in business behavior are unfortunately too often in ideas of economic, not sociological, theories. The emphasis in economics (and in the commercial aspects of business) is upon the things exchanged, the tangible inducements to action, the ratios between inducements—i.e., prices—not upon the acts of cooperation as such. The distinction is of first importance. . . . We shall not well understand what we are doing if we confine our theory of business behavior to economics, though we also shall not understand it sufficiently if we leave the economic aspects out of account.<sup>6</sup>

R. A. Gordon's book, *Business Leadership in the Large Corporation*,<sup>7</sup> appeared in 1945; but it was largely the result of his research on conditions existing in the middle and late 1930's which had been interrupted by the author's wartime obligations. In his opening chapter, Gordon noted that study of business leadership in the large corporation cannot utilize the concept of the entrepreneur. In economic literature, the entrepreneur is generally regarded as the owner and manager of an enterprise and consequently as the risk-bearer. However, with separation of management and ownership, there is confusion as to what is meant by the entrepreneurial func-

<sup>3</sup> Cambridge, Mass.: Harvard University Press, 1948.

<sup>4</sup> *Ibid.*, Preface, p. ix.

<sup>5</sup> See especially chap. vi., "On Planning for World Government," pp. 134-175.

<sup>6</sup> *Ibid.*, p. 125.

<sup>7</sup> Washington: Brookings Institution.

tion. Some regard it as decision-making, others as risk-bearing. Further, the entrepreneur is usually regarded as reacting mechanically to market forces in a highly competitive system. Gordon preferred to drop the concept, and to speak simply of business leadership.

In this book Gordon examined the nature of business leadership, who performs the leadership function, and how it is performed, by a study of corporations included in the lists of the two hundred largest non-financial corporations compiled by the National Resources Committee for 1935 and the Securities and Exchange Commission for 1937. His findings may be summarized briefly. The functions of business leadership are twofold. First, there is decision-making, both initiation and approval, including the selection of other business leaders; and second, there is co-ordination, which is defined as the creation and maintenance of organization.<sup>8</sup> The leadership function centers primarily in the executive group, which is becoming a professionalized class. The professional executive receives the major portion of his compensation in salary and non-pecuniary rewards of power and prestige, and is only incidentally compensated out of profits through stock ownership and bonus schemes. Control, as distinct from initiation of decision, is also passing more and more into the hands of the professional executives as estate taxes are destroying large stockholding interests, and as increased corporate financial stability, independence, and government regulation of banking are freeing corporations from domination by investment bankers.

From these findings Gordon concluded that the profit motivation behind business decisions has somewhat declined; yet because prestige comes from successful operation, because management is legally obligated to run the business for the stockholders' benefit, and because of some management sharing in profits, profit-making is still the dominant factor in business leadership. Yet under professionalized management, in a situation where there is a latitude for choice in decision-making, the results may differ from the behavior ascribed to the old-fashioned profit-oriented entrepreneur. The professional executive, mindful of the prestige of his position

<sup>8</sup> Gordon's concept of "coordination" appears to be quite similar to Barnard's of "communication," which the latter described as the primary function of the executive.

as well as of profits, may be more cautious than the entrepreneur; and the professionalization of the function virtually assures the growth of a bureaucratic mentality. On the other hand, professionalization may lead to systematic research and planning, and, in the long run, to a more progressive organization than that ascribed to the single entrepreneur.

Peter Drucker's *Concept of the Corporation*<sup>9</sup> appeared in 1946. In this book Drucker raised the very fundamental question, How does the large corporation function in America's modern free society? He argued that big business is an integral part of the American economy, and that questions as to its desirability are irrelevant and merely nostalgic. Economic thought, Drucker believed, had done a disservice to the analysis of this basic question, not so much in and of itself as through the excessive reactions to its errors. Thus, *laissez faire* represented a great advance over earlier doctrines because of its emphasis on harmony, but it had been in error in assuming that this harmony was automatic. As a result, it became difficult to refute critics who rejected harmony as a social goal because it did not, in fact, arise automatically. Also, the classical economists had been in error in assuming the universality of rational behavior designed to maximize profits or utility. The reaction, that of denying the role of profits as a guide to social action, was, for Drucker, fallacious.

Drucker believed that, in a big business economy, social harmony is attainable and that profits serve a vital function. Harmony can exist only if the interests of society and the internal interests of big business coincide. Drucker believed that they do. "Whatever its social beliefs," he wrote, "modern industrial society must organize its economy in the large units of Big Business. Whatever contributes to the stability, survival and efficiency of these units, contributes directly to social stability and efficiency."<sup>10</sup> Those who, like Justice Brandeis, had condemned big business as evil had assumed that it was inefficient and sought after for the monopoly power that it possessed. Events, however, have proved that bigness is the only efficient way in which to organize modern production. Under present-day conditions of mass production, Drucker argued, big business no longer seeks monopolistic power.

<sup>9</sup> New York: John Day Company, 1946.

<sup>10</sup> *Ibid.*, pp. 210-211.



The essence of monopoly is the ability to restrict production in order to raise unit prices and, hence, profits. However, according to Drucker, the only way to gain profits in the mass-production industries, which are typified by continuing economies of scale, is to achieve the highest possible volume of production. Considerations of productive efficiency preclude restrictive policies.

Decentralization, Drucker feels, is essential. The only valid test of productive efficiency is profitability; and the only way to measure and compare the profits of different stages of production is to expose as many of them as possible to market tests. In a decentralized organization, each department might be free to buy materials outside of the company; or, if it buys from other departments within the company, it pays market prices. The profits of as many departments as possible are thus measurable. Yet all departments have the advantages of such specialized central services as research, engineering, and public relations. Under modern conditions, a firm might find a monopoly position to be a positive disadvantage as it loses the market measurement of efficiency. Thus, Drucker noted, General Motors has pursued a policy of holding its market share low enough to encourage competitors in the automotive field. However, he concluded, "All this is attainable only in a *decentralized* big business. Hence decentralization is the condition for the conversion of bigness from a social liability into a social asset."<sup>11</sup>

Studies of modern corporate organization, such as those by Barnard, Gordon, and Drucker, were essential to further understanding of the large firm and the applicability of competitive standards to the economy. Yet these works are disappointing in light of the questions raised during the 1930's.

Barnard, in calling for an organizational approach to the study of big business, indicated that there was a basic distinction between economics and his science of organization. He believed it necessary to de-emphasize the pecuniary aspects of business behavior in order to make organizational studies. It should be noted, however, that Barnard was seeking to use the theory of organization in order to explain interactions among groups, activities, and forces not customarily regarded as integral parts of a business firm. For this purpose, he defined the organization in such a way as to include

<sup>11</sup> *Ibid.*, p. 228. Italics as in original.

customers and suppliers, among others, whose interests are obviously not in the maximization of the firm's profits. Barnard's concept of the formal organization was to be used for the analysis of non-economic problems. If the organization were redefined so as to include only those activities and forces encompassed in the business firm, most of Barnard's objections to profits maximization would vanish. In other words, Barnard's essential quarrel is not with the validity of profits maximization but with its usefulness.

Gordon's study of business leadership is interesting as a detailed empirical study of the dominant role of management and the compensations received for decision-making and co-ordination, but it is unfortunately incomplete for a writer who had earlier urged a functional approach to profits. Gordon did not investigate the nature of the decisions made and therefore did not contribute any new insights as to whether business leaders more closely resembled Burnham's manager or Schumpeter's innovator. Nor did he examine the impact of competition on decision-making.

The approach used by Drucker is more promising. He sought to relate business practice to the social and economic goals of modern society. Yet, Drucker's work is weakened by his preoccupation with social harmony and by his neglect of economic analysis. Thus, his argument that mass production has destroyed the incentive to achieve monopoly is virtually incomprehensible. He states that the greatest profits are achieved by the largest possible volume of production, but does not discuss the limitations that make only a certain level of production possible. Presumably, production is limited, for the firm, by costs and by the amounts which can be sold at different prices; and there must be some level of production which best satisfies Drucker's profits test. It is impossible to interpret his idea of efficiency without relating it to profits maximization. Drucker's arguments do not, in any way, vitiate the businessman's motivation for achieving a monopolistic position or for looking askance at competition. In a dynamic sense, his argument that mass production may increase volume and lower costs is reasonable, but most acceptable when coupled with competition.

Drucker was most intimately familiar with General Motors, and his findings in many cases reflect the experiences of that company. His arguments for decentralization, for example, are those which are applicable to General Motors. He concluded that decentral-

ization is essential to his social harmony, but did not investigate the possibilities that decentralization may reflect difficulties in managing large organizations efficiently and may be used as an argument for dissolution.

B. *An Organizational Concept of a Large, Profit-Maximizing Firm*

Writers such as Barnard and Drucker, who have studied the organization and behavior of the modern large corporation, do not feel that economic theory can contribute to an understanding of today's business structure and performance. Both concentrated criticism on the assumption of profits-maximizing behavior which underlies economic analysis. However, they noted that profits are the fundamental measure of business efficiency. Gordon, in his study of business leadership, concluded that profits maximization is the most important but not the sole determinant of business decisions and behavior. Determination of the role of profits is essential, as the theory of the firm assumes that the equilibrium position is that at which profits are maximized. It should be noted, however, that the methodology of partial equilibrium analysis is amenable to the maximization or minimization of other variables.

Barnard defined a formal organization as "a system of consciously coordinated activities or forces of two or more persons."<sup>12</sup> To distinguish an economic or business organization, it would be possible to supplement Barnard's definition and define the business organization as "a system of consciously co-ordinated activities or forces of two or more persons in which the system is designed to orient the activities or forces towards the maximization of its own profits."

Barnard used the word "system" in preference to defining organization in terms of a group because the individuals to be included in the group comprising the system will vary with the nature of the problem to which organization theory is applied. In some cases, it would be necessary to include creditors, suppliers, and customers. The organization must have a purpose or it would not have been formed, and it must co-ordinate activities and forces to achieve this purpose.

<sup>12</sup> *The Functions of the Executive*, p. 81.



The controversial part of the above definition is not the portion which Barnard originally formulated but the addition made to distinguish the business organization. Barnard himself would object strongly, as he argued that profits could not be the purpose of an industrial organization. Profits are necessary to attract one group, the investors; but the organization, he felt, would disintegrate unless it had a broader purpose which satisfied the other participants. There can be no doubt that the business organization must satisfy at least the minimum demands of other participants in regard to income, job satisfaction, and status; but all that is required to meet our present definition is that the system orient the activities of all participants towards profits maximization, whatever their individual motivations in serving the organization. Barnard himself observed that "nothing but the balance sheet" keeps the managers' "non-economic motives from running wild."<sup>13</sup> Further, the executives, particularly in a large organization, operate within the system to check each others' non-economic decisions: the reader with even a slight acquaintance of business idiom should be aware of the widespread requirement that proposals be "justified" within the organization in terms of profitability. If it be accepted that the system is designed to channel executive activities towards profits maximization, it should certainly be beyond dispute that the system is also designed so to channel the activities of other employees and the impersonal forces utilized by the organization.

The stress on design of the system, rather than motivations of individuals, should negate or greatly reduce the force of observations such as the following:

But if you will stop taking the business man at his word and quietly watch him when he is off guard, you will find that he is taking care of poor old John who couldn't be placed anywhere else, that he is risking both profit and failure rather than cut wages, that he continues an unprofitable venture on nothing but hope rather than throw his men out of work.<sup>14</sup>

Actions such as apparently charitable retention of superannuated employees, refusal to cut wages in depression, or continuance of unprofitable work as an alternative to laying off employees may be rationalized as being designed to maximize long-run profits by rais-

<sup>13</sup> *Organization and Management*, pp. 14-15.

<sup>14</sup> *Ibid.*, p. 15.

ing workforce morale and improving labor relations. However, if we are concerned with the behavior of the organization, it is not necessary to attribute such subtle motives to individual executives. While executives may act in response to such emotional stimuli as sympathy or vanity, the organization must be considered as designed to restrain these acts and minimize their effects. The individual manager or executive may pursue a policy which is not consciously intended to maximize profits, or he may even make a decision which is obviously unprofitable. Or, excessive specialization and orientation towards a suborganization such as the sales department or a particular production division may distort the frame of reference within which a particular executive makes a decision. The extent to which such practices prevail at any one time, or the length of time for which they continue, may be regarded as indicia of inefficiency of the system. Presumably, when the divergence from profits-maximizing behavior becomes great enough, the system should react to correct the situation. The larger the organization, the less important is the individual vis-a-vis the system; and one would expect, *ceteris paribus*, the less would be the divergences.<sup>15</sup>

The definition of the business organization suggested here avoids another group of objections to the assumption of profit-maximizing behavior. Barnard states that at certain times creditors, suppliers, and customers must be regarded as parts of the organization. Under our definition they would clearly be excluded, as the system cannot co-ordinate their activities so as to maximize its own profits. R. A. Gordon, in discussing the influence of financial groups on business leadership and the role of such groups in leadership, cites a letter from three banking houses to the president of the American Telephone and Telegraph Company, reading in part:

Our interest in the success and prosperity of your company induces us to repeat to you what we have already said, verbally, to your predecessor, Mr. Fish.

We consider it of vital consequence to the financial welfare of the company that no expenditures should be entered upon in the near future, except such as are absolutely necessary, no matter what the prospective

<sup>15</sup> However, with increasing size the ability of any one individual, operating primarily within a sub-organization, to comprehend the correct course of action for the entire organization becomes less. This is offset by standard operating procedures and proper channeling of information and orders.

profits on other expenditures may be—the credit of the company being of paramount importance.<sup>16</sup>

If A. T. & T. followed the advice given in this letter, it is perfectly conceivable that it adopted a course of action which, examined as an isolated phenomenon, did not appear to be designed to maximize that company's profits, and that this course of action was, nevertheless, consistent with the purpose of the system.<sup>17</sup> The specific course of action, however, must be looked at as a part of a larger decision and as the result of the interaction between two organizations.

For many years, J. P. Morgan and Company served as a "traditional banker" for A. T. & T., heading the investment bankers' syndicates which underwrote the security issues of the company and of its subsidiaries. During this period members of J. P. Morgan and Company and the First National Bank of New York customarily served on the board of directors of A. T. & T.<sup>18</sup> In a legal sense, A. T. & T. is primarily a holding company, the majority of its assets being the securities of its separately incorporated subsidiaries (although the parent company does operate the long-lines system), and the board of directors is an integral part of the corporation. Under our definition of a business organization, however, the wholly or predominantly owned subsidiaries are clearly a part of the organization; but that part of the board of directors which represents the interests of the investment bankers is not to be included. We are still speaking of systems, not individuals or groups; and it is indeed to be assumed that, in making certain decisions or casting certain

<sup>16</sup> *Business Leadership in the Large Corporation*, p. 201.

<sup>17</sup> Such a policy might be rationalized in terms of long-run profits maximization on the grounds that any other course of action which increased the estimated income stream but decreased security also increased the firm's discount factor by so much that the prescribed course of action did maximize the present value of the income stream. In the present case, and in many similar cases involving security *versus* profits, this type of rationalization is irrelevant. The analysis would hold only if the risk-preference functions of the company and of the investment bankers coincided, which is extremely unlikely. In any other case, the actual course of action would be a compromise between a course maximizing the company's profits and one maximizing the investment bankers' profits on their capital. Such situations may arise in cases where an investment banking syndicate underwriting a corporation's security issues obtains for its representatives some decision-making function in the corporation. The end result, where risk-preference functions differ, will depend on the bargaining power of each and need not represent the course of action either would most desire.

<sup>18</sup> This arrangement is discussed in Gordon, *Business Leadership in the Large Corporation*, pp. 207-214.



votes, the bankers' representatives were functioning as a part of the organization.

Thus, it may have been to A. T. & T's long-run advantage in terms of the availability and cost of obtaining capital (as well, perhaps, as the advantage of continuing good will and financial advice), to accept certain restraints on its actions which increased the confidence and security of its bankers. It might be assumed, then, that A. T. & T. continued to take actions designed to maximize profits subject to an outside restraint, rather than to assume that, for some reason, the company deliberately chose a course of action which did not maximize its profits. Most examples of firms apparently subordinating profitability to other objectives such as security can probably be dealt with by assuming that a firm seeks to maximize its profits, subject to outside restraints, imposed with or without its consent, which limit the alternative courses of action open to the firm.

One final problem remains in our definition of a business organization. There is no clearly stated and generally accepted economic definition of profits. Profits may be described roughly as revenues less costs, and the goal of the firm may be described as maximization of the present value of the profit stream.<sup>19</sup> The firm chooses a course of action which it believes will maximize the total value of the revenue stream less the cost stream over some period of time, discounted at some rate which the firm uses to equate future and present values. The discount rate need not be constant; it may have a certain value for, say, the next three years and a different value for the more distant future, or it may vary for different products produced within the same organization. The discount rate should reflect factors such as the riskiness of the enterprise, the subjective risk-preference of the organization, and the degree of preference for present over future income. The planning horizon, or the distance into the future for which the revenue and cost streams are estimated, will also vary from firm to firm. Thus, two similar firms, faced with a similar situation, may possibly act differently, and yet both may be considered as maximizing profits. Each may estimate the future income and cost streams differently (perhaps making different modifications in the values assigned to the streams because

<sup>19</sup> For an excellent discussion, see F. A. Lutz and Vera Lutz, *op. cit.*, chap. ii, pp. 16-48.

of uncertainty), each may use a different discount schedule, and each may conceive of a different horizon. However, these divergences should lead more often simply to differing present values ascertained as maxima than to marked differences in the most profitable courses of action to choose.

An extremely serious and long-recognized difficulty in defining profits lies in distinguishing between them and costs. As examples: Is a large bonus paid to a corporation's chief executive to be treated as a distribution of profits or as a cost of obtaining the executive's services? Can the continued employment of Barnard's "old John" be regarded as a distribution of profits rather than as an economically unjustifiable cost? Are the payments to holders of income bonds made out of profits or are they costs of obtaining capital? And how does one treat the dividends paid to holders of preferred stock, particularly non-participating cumulative preferred stock?

Another closely related difficulty arises in determining the contribution or contributions for which profits are the return. Knight suggested that they are a return for assuming uncertainty (uninsurable risk); Schumpeter regarded them as the rewards of entrepreneurship which accrued to successful innovation. Gordon, on the other hand, suggested that in many cases profits are a non-functional residue.

Thus, since it is impossible either to separate profits from costs or to refine the term functionally in ways that would be generally acceptable, our present definition of the business organization does not attempt to specify the profits which the organization is presumed to be maximizing. This, admittedly, avoids the semantic issue; but the precise definition of profits is essentially irrelevant to the present analysis, and it does not seem that anything is lost through this avoidance in the way of an understanding of the actions of a business organization. We have defined the business organization as maximizing its own profits, and therefore we may define profits as "a return to any and all functions, whether risk-bearing, decision-making, or innovation, which would not be performed in the organization's absence by the activities or forces it co-ordinates." However important a rigorous definition of profits may be for distribution theory or for a statistical study of profitability, such a definition is unnecessary in partial equilibrium theory which does not attempt to quantify its results.

In some respects, the larger the business organization, the more appropriate is our basic definition. As the size of the firm increases, individual motivation should become less important relative to the goals of the system. In most large firms, no one man, even the president or the chairman of the board of directors, is in a position to direct the company according to his own desires or even to comprehend the totality of its actions.<sup>20</sup> The committee system, from the board of directors down to the lowest levels of operating management, staff reports, internal reviews and audits, formal lines of responsibility and authority, all serve to channel individual efforts to the best interests of the organization. The feeling of personal responsibility for the care of "old John" is replaced by elaborate pension schemes and provisions for severance and lay-off pay, and in most cases the administrators of the plans have little or no personal contact with the beneficiaries. The organization fosters and demands loyalty to itself. Further, the large organization may be more able to pursue a course of profit-maximizing action which is capable of analysis by economic theory than is the small firm, as irrational acts are more restricted by the more complex system, and more specialized cost and demand information may be available to the large firm.<sup>21</sup>

During 1960, a series of antitrust cases brought in the electrical equipment industry gave a dramatic demonstration of the ability of the large, presumably profit-oriented business organization to impose standards of behavior on its members. In a group of related civil and criminal actions against twenty-nine firms and a number of individuals, the Antitrust Division charged the defendants with conspiratorial price fixing, rigging of bids, and market sharing in many specific electrical equipment lines.<sup>22</sup> The cases would seem

<sup>20</sup> Examples of this situation are given in H. Maurer, *Great Enterprise: Growth and Behavior of the Big Corporation* (New York: Macmillan Co., 1955), pp. 145-151. See also, E. I. du Pont de Nemours & Company, *Du Pont: The Autobiography of an American Enterprise* (New York: Charles Scribner's Sons, 1952), p. 130.

<sup>21</sup> See J. S. Earley, "Recent Developments in Cost Accounting and the 'Marginal Analysis,'" *Journal of Political Economy*, LXIII, no. 3 (June, 1955), 227-242. The author argues that refined accounting methods are being developed which supply information permitting business decisions to be made in terms of marginal cost and revenue at the same time that academic economists are questioning the present validity of marginal analysis.

<sup>22</sup> From February 16 through October 20, 1960, the Justice Department filed eighteen civil complaints and twenty-one criminal indictments. See, as typical, *U. S. v. Westinghouse Electric Corporation, Allis-Chalmers Manufacturing Com-*



to be of little interest to lawyers and economists concerned with legal precedent and interpretation of the antitrust laws, as they dealt with crude collusive behavior which has long been recognized as the simplest and most clear-cut type of antitrust violation; yet they attracted wide public attention because of the size and status of the corporate defendants, the likelihood of extremely heavy damage suits, the mysterious and romantic aura of secret meetings and coded communications, and the human tragedy of jail sentences imposed upon high-ranking and respected executives. From the point of view of the present discussion of the concept of a business organization, the position of the indicted executives, most of whom pleaded guilty to criminal charges, is the most fascinating aspect of the cases. Several of the corporations, including the largest defendant, General Electric Company, insisted that their top management and directors knew nothing of the illegal activities and that, indeed, these activities were counter to expressed company policies. Whether or not these claims are true,<sup>23</sup> the cases illustrate the contention that the organization, not any individual, must be regarded as the motivating force; and they indicate that claims of individual ignorance should be regarded as absolutely no defense against civil antitrust action designed to check the organization's activities. Examples of organizational pressure in the electrical equipment industry were well described in a *Wall Street Journal* article of January 13, 1961, which reviewed the experiences of three of the indicted individuals.<sup>24</sup> One man's superiors introduced him to competitors with the implication, never explicitly stated, that talking with them was to be one of his responsibilities. He considered refusing the job, but thought that perhaps such contacts were part of normal business procedure and that his refusal would be considered naïve. After engaging in price-fixing discussions for some time, he stopped worrying since he believed that he was

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pany, *Federal Pacific Electric Company*, *General Electric Company*, and *I-T-E Circuit Breaker Company*, Civil No. 27716 (D. Ct. East. Pa., 1960), and *U. S. v. General Electric Company*; *Allis-Chalmers Manufacturing Company*; *Federal Pacific Electric Company*; *I-T-E Circuit Breaker Company*; *Westinghouse Electric Corporation*; *Clarence E. Burke*; *Royce C. Crawford*; *L. W. Long*; *William H. Schiek*; and *J. W. Stirling*, Criminal Action No. 20235 (D. Ct. East. Pa., 1960).

<sup>23</sup> The trial judge expressed his doubts, "... certainly I am not naïve enough to believe that General Electric didn't know about it and it didn't meet with their hearty approbation." *Wall Street Journal*, Jan. 9, 1961, p. 8.

<sup>24</sup> P. 10.

winning his superiors' approval by his performance. Another man expressed bitter regret over his failure to ask questions about his responsibilities. He noted that he had entered the industry as a young man with a blind faith in the acceptability of its customs and practices, and that widespread price fixing had been common knowledge. He had had great respect for his superiors and had felt only pride when they entrusted him with the responsibility of maintaining certain prices. If such attitudes pervade an organization, there is little or no need for top executives and directors to have personal knowledge of specific meetings and agreements.

The above concept of the large firm is intended only as one to which both partial equilibrium theory and newer theories of organization and communication are relevant. The question of whether these large firms do in fact seek to maximize their own profits is essentially an empirical one; and it can be answered only through observations of actual business behavior, testing of the consistency of the results predicted by profits maximization with these observations, and a study of the reasons given by businessmen for their actions. Synthesizing models proves absolutely nothing about the validity of their underlying assumptions.

### *C. Concepts of the Large Firm as an Organization Not Maximizing Profits*

Recently the assumption of profits maximization and the use of marginal analysis implied by such an assumption have come under renewed attack and defense.<sup>25</sup> The current debate revolves first, around efforts to reconcile economic theory with work in organizational and communications theories or to test it against such work, and second, around recent developments in business accounting techniques and procedures.

<sup>25</sup> On the earlier debate, see the following: C. I. Barnard, *The Functions of the Executive*; R. L. Hall and C. J. Hitch, "Price Theory and Business Behavior," *Oxford Economic Papers*, no. 2 (May, 1939), pp. 12-45; R. A. Lester, "Shortcomings of Marginal Analysis for Wage-Employment Problems," *American Economic Review*, XXXVI, no. 1 (March, 1946), 63-82; Fritz Machlup, "Marginal Analysis and Empirical Research," *American Economic Review*, XXXVI, no. 4, part 1 (Sept., 1946), 519-554; R. A. Lester, "Marginalism, Minimum Wages, and Labor Markets," *American Economic Review*, XXXVI, no. 1 (March, 1947), 135-148. See also rejoinders by Machlup, pp. 148-154, and George Stigler, pp. 154-157.

Communications theory, resulting almost entirely from the work of C. E. Shannon,<sup>26</sup> describes the essential properties of any communications system, utilizes a specific and quantifiable definition of information, and has developed methods for evaluating the efficiency of any communications system in transmitting information. Shannon's basic model is both simple and generalized. It will be used later in this chapter to develop a rudimentary economic model of our own.

On the other hand, there is no single, unified theory of the organization. For many, Barnard's work, attempting to develop the concept of a formal organization and its implications both for society and for those associated with such an organization, remains classic. In recent years the problems of the organization have attracted a number of social scientists; and most of the important work in this field has been done outside of economics by psychologists, sociologists and political scientists, and by economists who are dissatisfied with the present orientation of their discipline. In general, organizational theorists are seeking to explain the influences of organizations on the behavior of individuals who come into contact with them and to develop a framework within which reasons for the formation, survival, and decline of organizations can be discovered and described.

In 1958 J. G. March and H. A. Simon published a study designed to review and systematize the knowledge of organizations resulting from diverse research and writings in this field.<sup>27</sup> Basically, organizational theories as described by March and Simon comprise a number of propositions relating to organizations and to types of organizational and individual behavior induced by different stimuli within both the environment faced by the organization and the environment it creates for its members. These propositions have been subjected to widely varying degrees of empirical verification. March and Simon distinguish three major lines of work in organizational theory; and accordingly they describe three groups of propositions: first, treating organization members as passive instruments; second, treating the members as individuals with values,

<sup>26</sup> *The Mathematical Theory of Communication* (Urbana: University of Illinois Press, 1949).

<sup>27</sup> *Organizations* (New York: John Wiley and Sons, 1958).



attitudes, and goals of their own who must be motivated in their organizational behavior; and third, treating the members as problem solvers and decision makers. The propositions are used to develop interesting and useful insights into organizational behavior; and the study by March and Simon must be regarded as a valuable reference for students other than organizational theorists seeking an understanding of the social as well as economic implications of organizations such as the modern large business corporation. Yet the absence of a single, widely accepted theory of the organization would seem to be a necessary result of the lack of a unifying principle which could tie together the large number of essentially independent propositions that have been derived from much research, observation, and thought.

A. G. Papandreou, in 1952, sought to reconcile the economists' frame of reference towards the concept of the firm, including recent contributions such as the theory of games, with Chester Barnard's concept of conscious co-operation as the fundamental characteristic of formal organizations.<sup>28</sup> The basic feature of the economists' concept, according to Papandreou, was the maximization of an ordinal preference system.

Papandreou accepted Barnard's definition of the formal organization as a "system of consciously coordinated activities or forces of two or more persons," and observed, as we noted above, that the system, not the co-operating individuals, is the essential element:

Organization is not conceived, then, as a *group* of persons; rather it is conceived as an *action field*, as a system of consciously interdependent actions of two or more persons. When we consider persons in their roles as members of an organization, we regard them in their purely functional aspects, as mere phases of cooperation.<sup>29</sup>

Papandreou also observed that, in order for conscious co-operation to exist, there must be a purpose or common goal of the organization. But he refused to take the next step that has been suggested here, that of defining the business organization, or firm, in such a way as to treat profits maximization as the purpose of the organization. Rather, he proposed that the business organization should

<sup>28</sup> "Some Basic Problems in the Theory of the Firm," *A Survey of Contemporary Economics*, II, ed. Bernard F. Haley (Homewood, Illinois: Richard D. Irwin, Inc., 1952), 183-222.

<sup>29</sup> *Ibid.*, p. 185. Italics as in original.

be viewed as rationally maximizing some preference function in which profits might appear as an important, but not the sole, factor.

The firm, as viewed by Papandreou, is a threefold system: of communications by which strategy for achieving the common goal is disseminated among members of the organization; of authority, which is defined as the assurance that a communication would be acted upon by a recipient whatever his individual judgment as to its effectiveness in achieving the goal; and of influence, which connotes suggestion and persuasion rather than command and which operates upward, downward, and horizontally within the communications network and which is received from external sources as well as from within the firm. The organization's activities, designed to further its purpose, are directed by a "peak coordinator" who alone views the whole complex of internal and external relations of the firm and who formulates its highest strategy.

In discussing profits maximization, Papandreou seems to neglect the distinction between the "peak coordinator" as a person or group of persons and the function of "peak coordination" within the organization. Thus, he quotes with approval Hicks's comment that "the best of all monopoly profits is a quiet life,"<sup>30</sup> despite the fact that a quiet life is evidently enjoyable by human beings who are subject to fatigue and is therefore a personal rather than an organizational goal.

There does not appear to be any conceptual improvement in Papandreou's model over one in which profits maximization is considered to be the goal of the organization; and the personal influences and motivations which are in opposition to this goal and which act upon individuals, whether peak co-ordinators or hourly employees, are regarded as restraints subject to which the organizational purpose is carried out. To the extent that these personal motives and influences are in opposition to profits maximization, the system could be expected to combat them. Thus, one electrical equipment executive interviewed by the *Wall Street Journal*<sup>31</sup> was driven to drink and insomnia by the conflict between his personal standards of conduct and the behavior imposed upon him by his company; but he continued to receive unsigned letters, to receive

<sup>30</sup> J. R. Hicks, "Annual Survey of Economic Theory: The Theory of Monopoly," *Econometrica*, III, no. 1 (January, 1935), 8.

<sup>31</sup> Jan. 13, 1961, p. 10.

telephone calls at his home, and to make calls from public booths in connection with his price-fixing activities. The organization, as such, does not possess a sense of ethics, nor is it subject to the human sensibilities which could be attributed to the individual entrepreneur. However, the organization is limited, as is the individual, by legal restrictions and, perhaps more significantly, by the force of public opinion which can exert an important influence on profitability.

The approach that Papandreou seems to oppose rightly is one assuming that the sole purpose of an individual entrepreneur, as a person, is the maximization of the profits of his organization. But this assumption is neither realistic nor necessary for the use of profits maximization in economic theory dealing with the large business organization. In rejecting profits maximization in order to eliminate the concept of the entrepreneur or to bring it into consistency with organizational theory, Papandreou seems to have reacted in such a fashion as to overcompensate for the original difficulty.

Papandreou is aware of difficulties in his model. He states that a substitution of preference-function maximization for profits maximization will reduce error, but at the cost of increased difficulty in positing operationally meaningful theorems relating to firms' behavior. He points out that the theory of the firm has achieved more precision than the theory of consumer behavior because of the assumption in the former of a single definable motivation. He notes that one should not reject the assumption of profits maximization solely on the ground that it is unrealistic, but should show, in order to justify the rejection, that use of the assumption does not lead to propositions which are in accord with empirical data. He cites, as an alternative approach, Alchian's treatment of firm behavior, in which the economic system is regarded as a selector of the most profitable firms, regardless of the processes by which firms arrive at their decisions.<sup>32</sup> It would seem, however, that a definition of the organization, not any individual, as the maximizing unit overcomes Papandreou's major objections to the use of the assumption and negates most of the force of the difficulties he raises.

In Papandreou's system, the key factor is influence, both in-

<sup>32</sup> Armen A. Alchian, "Uncertainty, Evolution, and Economic Theory," *Journal of Political Economy*, LVIII, no. 3 (June, 1950), 211-221.



ternal and external. The peak co-ordinator must be regarded as rationally maximizing a preference system, but the elements of this system will be determined by the influences reaching and affecting the peak co-ordinator. Papandreou makes no reference to the manner in which the organization facilitates or hinders the flow of influence on the co-ordinator. In a 1955 article recent developments in communications theory were used by R. M. Cyert and J. G. March to examine this and related problems; and the results were compared with those of traditional oligopoly theory.<sup>33</sup>

Cyert and March noted that the theory of oligopoly price was unsatisfactory as it failed to explain either the level of price or price changes. They stated that one of the commonest propositions in organizational theory was that "a change in organizational structure results in a change in operative goals,"<sup>34</sup> and that this feature of organizational theory has relevance to the pricing problem in an oligopolistic market. Organizational structure, they explained, can be defined in terms of two characteristics, its communications pattern and the size of the decision-making units.

The communications network, in the model of Cyert and March, performs the function of relaying information on which the decision makers rely in anticipating future sales, costs, and competitors' behavior, the factors which, they commented, were considered relevant in traditional oligopoly theory. The communications network also disseminates information to members on the policies of the firm which have been determined by the decision makers. Focus was directed to the relay points of the communications network, which receive, encode, and decode items of information. The relay points are characterized by the number of variables, such as cost or demand, about which they transmit information. The size of the decision-making unit is determined by the number of individuals comprising the unit who can be described as wielding influence unexcelled by any other member. Thus, Cyert and March observe, a committee of four on which two members dominate the other two but are equal in their influence on each other, would be regarded as a decision-making unit of two.

To this model, Cyert and March added four hypotheses, the

<sup>33</sup> "Organizational Structure and Pricing Behavior in an Oligopolistic Market," *American Economic Review*, XLV, no. 1 (March, 1955), 129-139.

<sup>34</sup> *Ibid.*, p. 129.

validity of which they maintained had been demonstrated in communications theory, psychology, sociology, and related fields. These were:

1. Decisions by a group will, in general, be more dependent upon firm policy [policy which has already been established in the firm] than will decisions by an individual.

2. If a decision contrary to firm policy is reached by a decision-making unit, it will be more stable if made by a group than if made by an individual.

3. As the length of the communication chain is increased, factors are introduced that have the effect of inhibiting change.

4. The character of the communication chain introduces a bias into the information transmitted to the decision-making unit.<sup>35</sup>

Two firms, each a variant of the original model, were then described:

1. A model of a firm in which price changes tend to be infrequent and reaction to competitors primarily passive might have the following organizational characteristics: (a) Price is determined by a committee of equals. (b) Communication chains between the decision-making unit and the primary sources of information are long (both upward and downward). (c) The unit making the actual price decisions does not have the responsibility for establishing the criteria for price decisions (i.e., the decision-making unit is decentralized and is subject to dicta from above with respect to price policy). (d) Demand information is channeled through a cost relay point. (e) Firm policy information is channeled through a cost relay point. (f) Information on competitors is channeled through a cost relay point.

2. A model of a firm in which price changes tend to be frequent and reaction to competitors tends to take the form of price-leadership might have the following organizational characteristics: (a) Price is determined by an individual. (b) Communication chains between the decision-making unit and the primary sources of information are short (both upward and downward). (c) The decision-maker for specific price decisions also has the responsibility for establishing the criteria for price decisions (i.e., the decision-making unit is centralized). (d) Cost information is channeled through a demand relay point. (e) Firm policy information is channeled through a demand relay point. (f) Information on competitors is channeled through a demand relay point.<sup>36</sup>

The two firms were then considered as no-cost duopolists, neither anticipating its rival's reactions, sharing a market under the

<sup>35</sup> *Ibid.*, pp. 132, 133, 134.

<sup>36</sup> *Ibid.*, pp. 135-136.

equilibrium conditions of Cournot's solution. An increase in demand was posited. It should come as no surprise to the reader that Firm 2, with a rapid change in perception of demand and a tendency to overestimate demand, became dominant and that the market share of Firm 1, with a slow change in perception and an underestimation of demand, declined.

After this demonstration, Cyert and March commented rather weakly that their solution would be a stable one only if the controlling group in Firm 1 was satisfied with the results and did not demand a reorganization to make their firm more similar to Firm 2 in organizational structure.

Approximately a year later Cyert and March wrote another article, more sweeping in scope as to the relevance of economic theory to the problem of oligopoly.<sup>37</sup> In this article they proposed that the assumptions underlying the economists' theory of the firm be revised in four respects.

First, the assumption of a profit-maximizing entrepreneur should be replaced by the assumption that the goal of the firm is simply "an acceptable level of profits."<sup>38</sup> This substitution, they feel, is justified because experiments have shown that individuals put in a maximizing situation tend simply to set acceptable-level goals and because, if one assumes that the organization maximizes profits even though its individual members do not maximize pleasure or utility, certain attributes of observed organizational behavior are inexplicable. Examples of these behavior patterns are given and will be quoted and discussed a few pages below.

Second, the theory of the firm, Cyert and March believe, must deal explicitly with the decision-making processes within the firm, rather than simply to assume that, knowing its cost structure, it reacts to market influences. Most important in this respect, they indicate, is the budgeting process. They regard the budget as a prediction, schedule, theory, and precedent. It is a prediction of future sales, costs, and profits; and a weakness of classical economics, Cyert and March contend, is that the theory assumed such predictions always to be correct. As a schedule, the budget imposes a predetermined pattern on the firm's behavior even though external conditions

<sup>37</sup> "Organizational Factors in the Theory of Oligopoly," *Quarterly Journal of Economics*, LXX, no. 1 (Feb., 1956), 44-64.

<sup>38</sup> *Ibid.*, p. 45.



change. It is a theory in that it describes relations among factors in such a way that sales and costs, for example, can be used as guideposts to the attainment of the acceptable level of profits. The budget sets a precedent in the sense that the goals are a function of previous achievement. Cyert and March do not make the significance of this concept of the budget clear, except to state that it sets norms for the members of the organization and that decisions made in the budgeting process are those with which economists should be concerned.

Third, the fact that a business organization is made up of subunits means that the goals of these subunits must be considered even though such consideration involves sacrifice of the organization's goals. Therefore, "organizational slack"<sup>39</sup> exists which will be taken up only when it appears that the acceptable level of profits will not be attained.

Fourth, models of the firm should not contain specific decision rules, for such rules must have an empirical basis and cannot be derived by deduction.

Cyert and March note that the one advantage of the profits-maximization assumption is that it leads to precise and definite results. They claim that a theory using their assumptions can do equally well; and to demonstrate this, they reproduce the solution for the case of a dominant firm willing to let minor firms sell what they will at a price it sets; and they note that a definite result obtains whether the dominant firm sets its price so as to equate marginal cost and marginal revenue, as described in the textbooks, or rather, as Cyert and March assume, so as to achieve a satisfactory level of profits. Presumably in fulfilment of their fourth proposed revision, the criteria used in setting such a price are not stated because of the absence of empirical data in their model.

In their two articles Cyert and March have made three major criticisms of economists' theory of the firm, particularly the concept of the oligopolistic firm: the theory cannot explain the level of price or the process of price change; its assumptions as to human motivation are doubtful; its assumptions as to organizational behavior are implausible. In assessing their contribution, it is necessary to examine the grounds on which their criticisms are made and the usefulness of their alternative assumptions.

<sup>39</sup> *Ibid.*, p. 46.

Certainly it is true that the theory of oligopoly price is indeterminate. It is true, however, because economists refuse to make purely deductive assertions as to the degree to which each oligopolist takes his rivals' reactions into account in planning his strategy. The solution is perfectly determinate if we assume that each firm acts as if it were completely independent of its rivals' behavior, in which the case merges with that of monopolistic competition, or if we assume complete awareness by each firm of the consequences of rivals' reactions to any move, which is the case of mutual dependence fully recognized and under which the monopolistic solution is applicable. Oligopolistic equilibrium is indeterminate because specific assumptions are not made as to the degree of information and as to the speed of firms' reactions. Thus, Cyert and March, in describing one function of the communications system as the relaying of information and in positing that the structure and length of this system will affect the speed of reaction, have not raised issues ignored by economists but have suggested a framework within which to re-examine familiar problems. The authors have failed to demonstrate any added usefulness of their particular model in solving the pricing problem. In demonstrating the solution to the duopoly problem that can be derived from the assumptions in their first article, they made the further assumption that both firms ignore each other's reactions and thus assume away the central problem that leads to indeterminateness in older solutions. The fact that Firm 2, with a speedier reaction to the market change than Firm 1, becomes dominant is simply consistent with the economist's adage that the market rewards efficiency and penalizes inefficiency.<sup>40</sup> There should be no doubt but that Firm 1 would reorganize along the lines of Firm 2 or would go out of business. Implicitly, the demonstration made by Cyert and March suggests the reverse of the proposition which they stated was fundamental to organizational theory, that "a change in organizational structure results in a change in operative organization goals." Rather, a change in operative organization goals, such as that caused by shifts in the market or significant changes in rivals' behavior,

<sup>40</sup> The further assumption is made that Firm 2 overestimates demand. Firm 2's estimated demand function, as set in the mathematical demonstration, is consistent either with this assumption or with the assumption that the decision-makers in Firm 2 are aware that Firm 1's reaction will be slow.

should result in changes in organizational structure, a proposition which is perfectly consistent with standard economic analysis.

Cyert and March state that the assumptions of economic theory as to human motivation are doubtful. In particular, human behavior is not maximizing behavior. This fact, they claim, is evidenced by an experiment in which subjects were asked to hit the centers of targets with darts. The subjects evidently set acceptable performance goals, as their accuracy varied with the size of the bullseyes. It is difficult to accept such evidence as bearing seriously on business behavior without much further experimentation in, say, gambling situations or situations otherwise leading to pecuniary gain and loss. At any rate, it has been argued above that it is the performance of the organization, not individuals, that may be regarded as rationally maximizing. The abstraction "business organization" can be used to replace the abstraction "entrepreneur." Cyert and March are aware of this possibility. Yet, they claim, the assumption of a profits-maximizing organization cannot be reconciled with recent findings which they cite:

For example, Gouldner has found that under very general conditions management is compelled to formulate rules of behavior that implicitly (if not explicitly) specify minimum acceptable behavior for employees and that actual behavior tends to approximate such a minimum. Mann and Baumgartel have found that the concern of lower management with costs (a concern that seems indispensable to a maximizing organization) is a variable depending on an assortment of factors such as age of the supervisor and the extent to which he feels organization decisions reflect his participation—as well as pressure from superiors. Selznick has shown how the activities and goals of an organization tend to be deflected by the goals of subunits. Lane has found that the weaker the financial position of a firm, the greater the propensity to violate governmental regulatory provisions; yet there is no evidence to suggest that violations of this sort are any less advantageous (in an absolute sense) to the strong firm than to the weak.<sup>41</sup>

The findings of Gouldner and Mann and Baumgartel, as summarized by Cyert and March, would seem to be perfectly consistent with the view, which they seek to refute, of the organization as designed to induce behavior from its members that would maximize its own profits although the individuals possess personal goals of their own. Selznick's observations would appear to reflect no more

<sup>41</sup> "Organizational Factors in the Theory of Oligopoly," p. 48.



than one of the costs of managing a large firm, particularly a decentralized one. If Lane's findings are accepted as valid in the main, despite recent disclosures made in the electrical equipment cases, all that they would necessarily indicate is that financially weaker firms have a higher subjective risk preference than stronger ones, a proposition not irreconcilable with profits maximization. A financially weak firm might look upon violation of the law as its only hope for survival.

Finally, Cyert and March note that economists' assumptions relating to organizational behavior are implausible. Presumably, the significance of this indictment is that economists ignore organizational and communications theories and, as a result, fail to understand the significance of the internal processes by which firms arrive at decisions. Thus, Cyert and March argue for a closer analysis of the budgeting process and for the use of communications theory in describing the length of the communication chain, the characteristics of each relay point, and the composition of each decision-making unit. Such analyses can be useful, and valuable insights into firm behavior may be derived from communications and organizational theories; but these theories seem most useful when coupled to a behavioral assumption such as profits maximization. If, with Cyert and March, we assume that the firm seeks merely an acceptable level of profit and refuse to use deductive reasoning in ascertaining how this level will be determined on the grounds that only empirical data are relevant in describing decision rules, the entire theory of the firm would seem useful only for descriptive purposes no matter how much we know about the characteristics of a communications system or no matter how systematically we describe the various functions of the budget.

Traditional economic theory can at least describe equilibrium in such a way that we can predict the direction of price and output movements resulting from a given change, if not their quantitative magnitudes; and it gives us some norms for judging the social effects of such movements. Under the assumptions used by Cyert and March we could make no such predictions until we had uncovered the relevant empirical data, and with such data we would presumably have our answer without recourse to any model or theory. Showing that, in one given textbook situation, a determinate solution is reached by assuming a set price as well as by assuming

a profits-maximizing price does not demonstrate anything of significance, especially where the factors determining the set price are explicitly excluded from the model.<sup>42</sup>

#### *D. Profits Maximization and Acceptable Profit Levels*

Recent work indicates that assumptions such as those made by Cyert and March are not in accord with current business practice. In particular, this work reviews empirical evidence suggesting that firms do seek rationally to maximize their profits, with all that this implies in terms of marginal analysis, and that large business organizations are attempting to establish communications networks and decision-making processes, including budgeting, designed for this purpose.

In 1952 R. S. Edwards wrote a short article consisting primarily of statements on pricing policy quoted from two British businessmen.<sup>43</sup> He prefaced these statements with observations of his own that he, as an economist and a former accountant, was surprised that common business procedures, such as the assigning of overhead rates by formula in preparing price estimates, had been so long ignored by economists and then suddenly regarded as an important discovery. He was further surprised that the existence of such practices was regarded as casting doubt on the validity of marginal analysis, "which is merely a method of stating formal qualities of sensible behavior."<sup>44</sup>

In Edwards' view, the economists who had recently discovered the textbook descriptions of accounting procedures failed to take into consideration the informal, unrecorded stages of the pricing decision.

The statements of the two businessmen indicated their desire to maximize profits. In the words of one, "that combination of quantity and price which gives the best final yield is obviously the combina-

<sup>42</sup> In the geometric solution to this problem used by Cyert and March, the quantity produced by the minor firms is determined by the intersection of their aggregate supply curve with the horizontal price line determined by the dominant firm. It is not clear what a supply curve, usually defined as a schedule of the quantities that suppliers would offer at varying unit prices, signifies without the implicit assumption that the suppliers are seeking to maximize their profits.

<sup>43</sup> "The Pricing of Manufactured Products," *Economica*, New Series, XIX, no. 75 (Aug., 1952), 298-307.

<sup>44</sup> *Ibid.*, p. 298.

tion which we shall adopt.”<sup>45</sup> Both showed an awareness that the nature of market demand is such that cost plus a markup could not ultimately determine price. Such a figure, they felt, was useful only as a starting point for consideration and would be modified as a result of the businessman’s intuitive understanding of the market.

However, if marginal analysis is to be of maximum use to the economist, it should be shown that the organization not only is motivated by profits maximization but also possesses a system designed to implement this goal. Recent work by J. S. Earley has explored this area and, in addition to further substantiating the empirical content of the hypothesis that profits maximization is the proper goal to assign to a business organization, has shown that the procedures and plans of large corporations are far from the rigid, formal budgetary process described by Cyert and March.

In a 1955 article Earley reviewed a number of articles published by the Committee on Research of the National Association of Cost Accountants.<sup>46</sup> Recent developments in accounting techniques described in these publications demonstrate, Earley believes, that while economists are expressing dissatisfaction with the present usefulness of marginal analysis, business practices are making an ever closer approximation to that technique. Earley traced the development of cost accounting, noting its early stages in which efforts were made to allocate as many costs as possible to specific segments of the firm. It was these relatively primitive stages, Earley suggested, that caught the attention of economists, led to widespread doubts as to the applicability of marginal analysis, and was responsible for comments such as R. A. Gordon’s, “The businessman, if not the economist, has accepted the accountant’s miracle of converting fixed cost into variable cost.”<sup>47</sup> However, accounting techniques have become more refined; and recent innovations have, in Earley’s mind, been ignored by economists who call for new approaches to the theory of the firm on the grounds that marginalism is unrealistic.

Little would be gained here by summarizing Earley’s review of NACA literature. However, certain seemingly outstanding features

<sup>45</sup> *Ibid.*, p. 302.

<sup>46</sup> “Recent Developments in Cost Accounting and the ‘Marginal Analysis,’” *loc. cit.*

<sup>47</sup> *Ibid.*, pp. 228-229.



of new techniques of "management accounting"<sup>48</sup> should be noted. The NACA has stated that accounting should assist in the choice among alternatives, and that, in this function, cost must be defined in different manners for different problems. Often, differences in costs and profits are more important to an operating decision than their absolute levels. Variable cost alone is important in short-run problems; in long-run problems, assignable fixed costs must also be considered, but only those which are actually incurred in the operation being examined and which would vanish in its absence. Flexible budgets, recognizing the relation between cost and rate of output, should be substituted for fixed budgets assuming unit costs based on a specific rate of output. The NACA warns against cost-plus pricing, noting, "cost has a role which differs according to whether the product being priced has an elastic or inelastic demand, whether competition is strong or weak."

Earley noted, "The mecca of the older cost accounting was 'average' and 'total' cost; that of management accounting 'marginal' cost (and benefit)."<sup>49</sup>

Roughly a year later, Earley published the results of a questionnaire survey designed to indicate the extent to which the principles espoused by the NACA had been adopted.<sup>50</sup> He limited his survey to companies rated as "excellently managed" by the American Institute of Management on the grounds that these companies were the pattern-setters and that their policies would be widely imitated. Earley's conclusions may be quoted, without going into the details of his findings:

In any case the major messages seem to be fairly clear: (1) Marginal accounting and costing principles have a strong hold among these companies, and the bulk of them also follow pricing, marketing, new product, and product-investment policies that are in essential respects marginalist. (2) Whether interested in short-run profits or long-run health, very few of these companies give any evidence of ignoring the opportunities and/or necessities of practicing marginalism in the above range of problems.

Whether the same will be found true of most American firms only further study—and perhaps the passage of time—can tell. "In the long

<sup>48</sup> *Ibid.*, p. 229.

<sup>49</sup> *Ibid.*, pp. 239, 231.

<sup>50</sup> "Marginal Policies of 'Excellently Managed' Companies," *American Economic Review*, XLVI, no. 1 (March, 1956), 44-70.

run," it is safe to say, the influence of firms such as these is bound to be substantial.<sup>51</sup>

By themselves, Earley's findings do not refute the criticisms of the anti-marginalists. The facts that a research group of accountants has recommended the use of marginal principles and that selected firms' responses to a questionnaire indicate their partial adoption of techniques based on these principles do not demonstrate the widespread existence of actual behavior consistent with the marginal hypotheses. The marginalists themselves have been insistent in warning against the use of stated principles and answers to questionnaires, and they have urged investigation of informal processes and of the applications actually made of principles in decision-making. Ascertaining, empirically, how businessmen do in fact behave is far from simple. Two studies of business price policies, appearing after Earley's articles, cast renewed doubt on either the usefulness or validity of the assumption of profits maximization.

The Brookings Institution has published the results of a series of interviews with the executives of some of the nation's largest firms, in which questions were asked dealing with the pricing of particular products, general price policy, and the organizational structure within which prices are determined.<sup>52</sup> The authors, A. D. H. Kaplan, J. B. Dirlam and R. F. Lanzillotti, put each of the firms studied into one of five classifications based on general price policy, although they emphasized that inclusion in a classification did not indicate that all of the firm's pricing decisions were based on that policy or, indeed, on any policy. The five policies most frequently encountered are as follows: pricing to achieve a target rate of return on investment; stabilization of prices and margins throughout the industry, which is often a secondary objective to target return but occasionally an independent goal; pricing either to maintain or to improve the firm's market position without reference to any required date of return; adjustment of price to meet conditions imposed upon the company from outside and beyond its control; and pricing related to product differentiation, generally implying conscious exploitation of a brand name through a price

<sup>51</sup> *Ibid.*, pp. 67-68.

<sup>52</sup> A. D. H. Kaplan, J. B. Dirlam, and R. F. Lanzillotti, *Pricing in Big Business: A Case Approach* (Washington: Brookings Institution, 1958).

premium. The last policy mentioned is, clearly, not an independent one but must be utilized in conjunction with other price policies.

Kaplan, Dirlam, and Lanzillotti concluded that the price policies surveyed tended to fall into a pattern clustering around target return pricing but that failures to meet stated goals and lack of compliance with general policies were so numerous that target return was not a "master key to pricing."<sup>53</sup> The fact that most of the companies sought to maximize their profits is indicated by their statements that they do not believe that they could increase their long-run profits by changing their pricing policies. One exception, however, is indicated by a statement of a senior official of U. S. Steel Corporation, "U. S. Steel has never tried to price to maximum profit not only in the short run but even in the long run."<sup>54</sup> The authors do not quarrel with the assumption that profits maximization is the ultimate goal of most firms, but they observe that the assumption is not operationally useful in analyzing pricing practices. More immediately relevant considerations, which set the limits within which profits-maximizing behavior can occur and which offer more promise for predictive purposes, are given by the nature of the product, the firm's cost structure, interdependence among products in multi-product firms, recognition of price leadership, and the core of company philosophy and tradition embodied in the corporate personality.

Subsequent to the publication of the Brookings Institution study, Lanzillotti wrote an article, based on the same interviews, but presumably developing his personal conclusions further than had been possible in a jointly authored book.<sup>55</sup> Lanzillotti notes an increased emphasis on target return on investment, and cites only three other general policies—stabilization of price and margin, target market share, and meeting or matching competition. The target rates of return, he states, are determined by company opinion as to rates which are "fair" or "just" returns on investment in that industry. Thus, Lanzillotti concludes, pricing is based on "planned" profits, and an assumption of profits maximization will provide neither unambiguous guides to behavior nor valid predictions of

<sup>53</sup> *Ibid.*, p. 284

<sup>54</sup> *Ibid.*, p. 23.

<sup>55</sup> "Pricing Objectives in Large Companies," *American Economic Review*, XLVIII, no. 5 (Dec., 1958), 921-940.



pricing. A more realistic theory of the firm, Lanzillotti believes, can be built upon data such as he presents, dealing with actual pricing methods and stated company objectives.

The Brookings Institution study is more cautious than Lanzillotti's article in assessing the significance of the interviews. The former's only explicit criticism of profits maximization is its operational uselessness in analyzing price behavior. Further, in *Pricing in Big Business*, there are clear statements of the limitations of the interview technique employed. In the Introduction several problems are noted. Frequently the top executives of a firm did not know, in detail, how their various products were priced. Actual pricing decisions are often made at fairly low levels of management by many company officials. An interviewer has no way of knowing what sort of information the price-maker uses, even if the information supplied to this official is known. The interviewers were told repeatedly that there is an "art" or "feel" to pricing which must take precedence over any formula. Details were withheld by the companies interviewed and the interviewers did not feel in any position to probe when the respondents appeared reluctant to explore a particular topic any deeper. Thus, it is no severe criticism of the study to note that the present author, who spent six weeks on a summer fellowship program at Du Pont's Wilmington headquarters, came away with a rather different impression of that company's pricing policy than that described by Kaplan, Dirlam, and Lanzillotti; and it is not surprising that, in a comment on Lanzillotti's article, M. A. Adelman took the author to task for misinterpreting the market policies of A. & P.<sup>56</sup> Such differences of interpretation should be construed as indicative of the difficulties inherent in the interview approach to business motivation, rather than as evidence of any carelessness or inaccuracy on the parts of the researchers or the critics.

J. W. Markham has made an observation which reflects a fundamental shortcoming of the Brookings Institution study. One must understand the environment within which decisions are made before seeking to analyze them. If markets now perform differently from the way in which they did formerly, the fundamental explanation may lie in such factors as increasing limitations on the scope of

<sup>56</sup> "Pricing Objectives in Large Companies: A Comment." *American Economic Review*, XLIX, no. 4 (Sept., 1959), 669-670.

private decision making; the growth of industry and government relative to agriculture, which has decreased the proportion of pure competition in the economy even if industry has not become more concentrated; and the increasing absolute size of corporations, which has led to greater use of committees and decentralized decision making. Today, a large firm's price policy is watched by Congress, unions, and the press, all of whom may object publicly to price increases, and by competitors who label the price cutter as a "chiseler" in business circles. Advertising and research offer less dangerous methods of competition than does pricing.<sup>57</sup> In light of this comment, it is quite possible that the price policies followed by the various firms interviewed are the closest approximations to profit-maximizing prices as described by marginal analysis which the firms' environments permit; and it is unfortunate that the Brookings interviewers did not explore such broad limiting factors as well as the more narrow ones they did note, such as nature of product and conditions of production.

Finally, even granting behavior not designed to maximize profits, target return pricing seems useless as a hypothesis upon which a theory of the firm could be built unless we can make some sort of generalization as to the determinants of the target rate. If the target is revised with market opportunities or if it is higher than the firm expects to attain, the resulting price behavior, if not the price policy, is identical with that of profits maximization. Esso Standard Oil Company, for one, told the Brookings interviewers quite frankly that it rarely achieved the return on investment called for in its pricing formula.<sup>58</sup> The failure to explain the forces determining an acceptable level of profits, however formulated, has been the greatest single shortcoming of virtually all efforts, including that of Cyert and March as well as that of Lanzillotti, to develop an analytically useful substitute for profits maximization.

The second study of price policy to be noted, W. J. Baumol's *Business Behavior, Value and Growth*,<sup>59</sup> seeks to solve this problem. Baumol is too discerning a theorist to permit such a flaw in his

<sup>57</sup> "Changing Structure of the American Economy: Its Implications for Performance of Industrial Markets," *Journal of Farm Economics*, XLI, no. 2 (May, 1959), 389-400.

<sup>58</sup> Kaplan, Dirlam, and Lanzillotti, p. 157.

<sup>59</sup> New York: Macmillan Company, 1959.

analysis. His work represents the most closely reasoned and convincing attack on profits maximization of those reviewed here.

Baumol notes that only reluctantly, and after a number of failures as a consultant to convince firms that they should adopt profit-maximizing courses of action, has he discarded the assumption. In its place, he offers the hypothesis that oligopolistic firms seek to maximize their sales revenue, subject to a minimum profit restraint. The minimum necessary profit is determined by competition for corporate securities on the capital market.

The hypothesis is based, admittedly, on "highly impressionistic" evidence.<sup>60</sup> Yet Baumol's contacts with the firms he describes were far less artificial than the types of contact made in interview situations. He notes frequent experiences of his in which firms refused or hesitated to abandon unprofitable markets even after being convinced that these markets were sources of loss. When a firm does drop an unprofitable line or territory it is usually with great reluctance and delay. Any proposal involving a reduction in sales, whatever its profit implications, Baumol found, is met with a marked lack of enthusiasm. When one inquires of an executive as to the health of his business, Baumol observes, the response is almost automatically in terms of rising or falling sales, with profit mentioned only as an afterthought.

There are several reasons why business managers should be concerned with maximizing sales. In many ways sales maximization promotes long-run profits. Consumers may avoid a product if they believe its popularity is declining, credit may be harder to obtain with lower sales volumes, a firm's market power suffers if it loses either distributors or its share of the market, and personnel relations are poorer in a firm which is firing than in one which is hiring. But in addition, management's pecuniary interests are more closely tied to size and volume of sales than to profits, as managerial salaries are more influenced by the former than by the latter.

However powerful a firm may be in its product market, Baumol believes, it represents a small fraction of the capital market and must sell its securities competitively. Stockholders' earnings are represented by both dividends and capital appreciation. Such earn-

<sup>60</sup> *Ibid.*, p. 47.



ings must attain an approximate degree of equality, in investors' minds, with those available from other firms, after allowance for risk, if a firm is to obtain funds on the capital market. Thus, minimum necessary rates of earnings are determined by the competitively set market prices of securities and the individual firm's needs for capital. If management is seeking long-run as well as short-run maximization of sales revenue, earnings will be retained and dividends paid out in such a way as to strike a balance between current needs to be financed out of earnings and the future availability of funds on the capital market, recognizing that dividends paid out usually enhance stock prices more than would an equal amount of retained earnings.

Baumol points out that his hypothesis explains certain aspects of observed oligopolistic behavior better than does profits maximization. For example, under the latter assumption, a firm which suffered increased fixed costs would not raise its price in response; while a firm behaving according to Baumol's hypothesis might raise price if the fixed costs required greater exploitation of market power in order to attain the minimum necessary profit rate. Observation suggests that fixed costs do, in fact, influence price. Similarly, business taxes which would be unshiftable by a profit-maximizing firm are, actually, shifted as would be expected under the sales revenue maximization assumption. The emphasis placed on non-price competition by big business is also explicable, since money spent on advertising will increase sales volume without lowering price and hence will increase sales revenue, whereas a cut in price achieving the same volume of sales will increase revenue by a lesser amount. A firm maximizing sales revenue will therefore prefer non-price competition to price competition even if the latter would have a somewhat more favorable effect on total profits.

The maximization of sales revenue subject to a minimum profit restraint is, Baumol comments, an approximation to a complex real world situation. Yet, he believes, it represents the facts of business motivation more adequately than does profits maximization; and it can explain features of observed behavior which the alternative hypothesis cannot. These are, he notes, scientifically valid grounds for tentative substitution of one hypothesis for another.

The welfare implications of Baumol's hypothesis are significant. Under his assumption, misallocation of resources between the oligopolistic sector of the economy and more highly competitive sectors would be less than under the assumption of profits maximization. Sales revenue will be maximized by the price and quantity at which marginal revenue is zero and price elasticity of demand is unity. Unless the minimum necessary profit is not earned by such a price policy, the point of unit elasticity of demand will determine the equilibrium position of the sales-maximizing firm. As long as marginal costs are positive, the demand curve downward sloping, and the minimum necessary profit less than the maximum profit possible, a profit-maximizing firm will produce less and sell at a higher price than a sales revenue maximizer. Further, rates of necessary profit set by the capital market will tend to be close to uniform between oligopolistic firms and others in the economy. Rather surprisingly, Baumol shows that, given the levels of expenditure and revenue, a sales revenue maximizing firm and a profit maximizer will use the same efficiency criteria for determining product mix and input proportions.

In the light of Earley's empirical findings, it is extremely difficult to evaluate the significance of Baumol's observations. The Brookings Institution study indicates the immense difficulties involved in interviewing businessmen, in no matter what depth, to ascertain their real motives. One crucial point in developing Baumol's analysis further would seem to be determination of the level of profits set by the capital market. It may be necessary to resort to the concept of a business organization which puts pressures on individual managers to fulfil organizational goals, regardless of their personal motives. Through ability to buy and sell securities, as well as through the latent power to replace executives, stockholders influence management not only to meet but to exceed the market rate of return. A firm offering securities competes for funds not only with other firms, but also with individual investors holding outstanding securities which they may be prepared to sell at any time. Monopolistic power, reflected in past and potential earnings, will be capitalized in security prices which an issuer can obtain, and will thus stimulate the desire for greater profitability as an aid to expansion and subsequent higher sales. Capitalization of a successful firm's earnings will also increase the base on which

the rate of necessary profit is measured by investors. A firm which maximized its profits would be in a far better position to compete on the capital markets without diluting the equity of its existing stockholders than one which contented itself with lesser profits; and, to the extent that the capital market is truly competitive, the minimum acceptable profit rate would tend to squeeze out firms with small profit potential and force the survivors and new entrants ever closer to profits maximization.

Finally, it should be noted that whether a firm maximizes sales revenue subject to a minimum profit restraint or maximizes profits, its equilibrium can be determined by marginal principles. The uses of organizational theory and communications theory in developing a theory of the firm, as advocated by Papandreou and Cyert and March, are important and valid; but Baumol's study as well as Edwards' and Earley's works contribute a strong presumption against the use of assumptions in these theories which are explicitly inconsistent with marginal analysis, whatever the role of profits maximization.

### E. *A Modern Study of the Corporate Entity*

In order to utilize the concept of the modern corporation as a formal organization designed to maximize its own profits, it is essential to identify the organization as an entity separate from the individuals who are its members. Such an identification was made by Berle when he spoke of the "corporate conscience." One recent writer, who deals with this problem, couples his study of the essence of the large firm with a vigorous, although apparently uninformed and unnecessary, rejection of economic theory.<sup>61</sup> Herrymon Maurer argues that the large corporation must be studied *in toto*, as a social phenomenon; and he feels that economic analysis offers little, if any, assistance in such a study. His main objection to the use of economic methodology, with which he demonstrates little familiarity or facility, is that it is based on the assumption of rational behavior designed to maximize immediate profits. Such an assumption, Maurer states, simply cannot describe the complex activities and motivations of giant firms today.

<sup>61</sup> Herrymon Maurer, *op. cit.*



Maurer first surveys American business history. The subsequent and major portion of the book presents the results and interpretation of the author's interviews with executives of fifty corporations and of research done with the co-operation of these firms and the assistance of staff members of *Fortune* magazine.

Maurer's main concern, in his historical survey, is with the motives of American businessmen. He discusses the Puritan and Quaker theological backgrounds and describes early nineteenth century American business practices as the result of "creative tension"<sup>62</sup> between the two theologies. He quotes extensively from the moral precepts of businessmen of the time and cites examples from their conduct to demonstrate that American business of the first half of the nineteenth century had little in common with the assumptions of the British classical economists. He describes these assumptions:

The first of these assumptions held that what a man wants in money, goods, and services is more than he can get. The second stated that a man pursues business activity entirely on the basis of self-interest. The third pointed out that a man matches his self-interest against other men by reacting in a prophesiable manner to the day-to-day fluctuations of market places. And the fourth concluded that the fusion of the self-interest of conflicting men, as long as self-interest was unrestricted, would produce the common good.<sup>63</sup>

In the period following the Civil War a new breed of businessmen, exemplified for Maurer by such men as Thomas Mellon, Daniel Drew, Cornelius Vanderbilt, Jay Gould, and Collis Huntington, became dominant. These men did, indeed, have the psychology described by the economists, "the unlimited pursuit of the highest possible immediate profits." In Maurer's interpretation of economic history, the common good was obviously not served by such behavior; and business practices were corrected by social pressure and legislation on the one hand, and, on the other, by the growth within businessmen such as Carnegie, Rockefeller, and Morgan of "a distinct sense of something larger and more challenging than personal ambition."<sup>64</sup>

Morgan's response to this awareness was to seek a business structure of trusts under which rationality and order would re-

<sup>62</sup> *Ibid.*, p. 30.

<sup>63</sup> *Ibid.*, pp. 37-38.

<sup>64</sup> *Ibid.*, pp. 40, 47.

place the chaos of competition. "Whatever disorderly methods had to be used to drive off competitors," Maurer writes, "were to Rockefeller's mind moral undertakings needed to promote decent sobriety and honesty in business life."<sup>65</sup> Carnegie relished competition, but his major purpose was to create and build industry.

The ideas and personalities of such men gave the impetus to change that has led to the modern corporation. In the past fifty years there has been a revolutionary transformation in the corporation, both in techniques and in motivation. Mass production, detailed financial accounting, production analysis, decision-making by committee, and decentralization have been accompanied by what Maurer calls the gospels of production and service. The gospel of production, "more and more goods for more and more people at lower and lower prices," has been substituted successfully for the goal of immediate profits maximization and for "warfare with competitors"<sup>66</sup> as a business method. This gospel of production has been supplemented by a rather vague gospel of service. In earlier days, Puritan and Quaker theologies would have provided an answer—"for the glory of God"—to the question of why produce more and more at lower and lower prices; but today the rationale is given by a feeling of responsibility towards employees, consumers, and stockholders on the part of business executives. In this fashion, Maurer views the development of today's big business.

Thus, Maurer equates economic rationality, at least in the classical theory, with immediate maximization of profits; and he argues that such behavior characterized American business for only a short period and that during this period profits maximization on the part of individuals did not bring about the common good.

It is not clear whether Maurer is seeking to refute the entire concept of profits maximization or only the idea of maximization of immediate profits, which he seems to think underlies most of economic theory. In the earlier part of his book, he devotes a chapter to "the New Manager," in which he argues that the business executive today cannot possibly be motivated by profits maximization. Yet somewhat later, after reviewing several recent examples of action and policy formation within large corporations which he claims can best be explained in terms of long-run survival, Maurer notes

<sup>65</sup> *Ibid.*, p. 51.

<sup>66</sup> *Ibid.*, p. 65.

that long-run profit maximization, which he calls "a concept prevalent in contemporary revisions of Classical theory,"<sup>67</sup> is a possible goal for the large corporation.

Maurer's treatment of economic theory, which he rejects as being an unsuitable tool of analysis for the large firm, is at best superficial.<sup>68</sup> Yet Maurer insists that there is a very real need for a theory of the large corporation which will explain its motivations and its role in society. Maurer does not offer such a theory, but he does suggest a concept of the corporation upon which such a theory could be built. Although remote from the author's central purpose, Maurer's concept is also one which is perfectly consistent with and useful in understanding organizational pressures such as those described by the *Wall Street Journal*<sup>69</sup> in reporting the experiences of electrical equipment executives indicted for price fixing.

In depicting the corporation, Maurer uses an analogy to the solar system:

The large corporation might better be imagined as a gravitational body, around which revolve several planets in roughly established orbits. In the primary series of orbits are members of the corporate community itself: directors, managers, executives of various degrees, and wage-earners. In the secondary groups of orbits are consumers, the public in general, competitors, dealers, distributors, subcontractors, suppliers, and stockholders. In a third and somewhat erratic orbit lies the federal government, in company with the governments of foreign countries in which the corporation operates.

The corporate center itself is described as "a body of traditions, coupled with an all-important core of decisions about price, production, and profits."<sup>70</sup> The goal of the corporation is not, for Maurer, profits maximization, but, rather, survival or continued health.

The nature of the competition in which the modern corporation engages has changed as well as have its structure and motivation.

<sup>67</sup> *Ibid.*, p. 170.

<sup>68</sup> See review by M. S. Baratz, which notes, "Second, in his critique of classical economics and the theory of the firm Maurer has chosen to caricature theory, rather than to analyze subtly its shortcomings" (Review of *Great Enterprise: Growth and Behavior of the Big Corporation*, by Herrymon Maurer, *American Economic Review*, XLVI, no. 4, Sept., 1956, 732).

<sup>69</sup> Jan. 13, 1961, p. 10.

<sup>70</sup> *Op. cit.*, pp. 167, 193.



Maurer feels that the large corporation is no longer particularly concerned with individual competitors, but simply assumes that their behavior is similar to its own. Here, Maurer implicitly raises the issue of mutual dependence recognized, but does not comment on any problems that might arise from such an attitude. The corporation is concerned, Maurer continues, with competition from new products and new techniques; and he echoes Schumpeter in stating that the best way to meet this competition is by promoting research and internal efficiency. Maurer's analysis of this type of competition is far milder than Schumpeter's. Instead of "creative destruction," Maurer speaks of "corrective competition." This competition does not act so much to destroy as to force managers to correct poor or obsolete practices. In Maurer's words, "It gives managers the opportunity to center attention on their own businesses and later to judge their own performances by the performance of other managers."<sup>71</sup> Corrective competition exists, for Maurer, within the divisions or among the products of one company, as much as among individual firms and industries.

The forces of the market, "the old impersonal controls of supply and demand,"<sup>72</sup> no longer check the large corporation in Maurer's schema; but control comes from the satellites surrounding the corporate center. An immediate control is the ethics of the managers. The profit and loss account serves as a barometer of error. Stockholders provide a latent threat although they exercise little control over a well-functioning management. The public, both as consumers and as the forces of general opinion, influences corporate decisions. And finally, in the background, is the government.

Maurer defines the corporate center as a body of tradition and decisions. His interviews with corporate executives indicate an almost overwhelming awareness of the existence of this center, and a conscious effort to subordinate individual differences to the corporate personality. Thus, he notes:

James T. Leftwich, president of F. W. Woolworth, has said simply, "We live Woolworth." Union Carbide executives actually refer to their company as "the community." The chief executives of many companies have stressed group-mindedness so emphatically as a motive fundamental to the management of any large corporate body and executives have been

<sup>71</sup> *Ibid.*, p. 172.

<sup>72</sup> *Ibid.*, p. 264.

motivated so strongly that the managers of some corporations have developed group traits and characteristics different from those of other executive bodies. It is thus possible to speak of a Bell System man (once irreverently called *homo telephonicus*) or a G. M. man or a du Pont man.<sup>73</sup>

Again, he quotes Frank Abrams of Standard Oil of New Jersey: "One must submerge one's own ideas into those of the group; and one must be careful not to get twisted with red tape. Above all, one must work toward unanimity."<sup>74</sup>

This phenomenon is not confined to operating top-level executives, but extends in one direction to the boards of directors, and in the other to lower-level management if not to hourly-wage employees. Maurer observes of the former:

The board of directors is, by nature, the agency of corporate immortality. . . . This duty expresses itself, naturally, in a sense of attachment by board members, not simply to the stockholders or the management or the workers or that diffuse group, the public, but to the corporate personality itself, the company.

As a further example, he mentions that A. T. & T's board has come to regard the nine-dollar dividend as an integral part of "the company's most priceless asset—its way of doing things, its corporate personality."<sup>75</sup>

Maurer further comments on the sense of community among executive groups. He notes that "the Company" becomes the focus of social as well as business life; it performs services such as legal advice, provision of loans, medical care, educational and placement assistance for children; it sends representatives to funerals; and it provides one with a sense of belonging to a group.

Thus Maurer has identified, or at least sought to demonstrate the existence of, a corporate entity. He has not proposed any theory to explain or predict the performance of the large corporation, other than to state that it seeks continued healthy existence. He appears totally unaware of the concept of maximizing the discounted present value of an income stream as a meaningful interpretation of profits maximization, or even as a first approximation of optimum business health. In sum, Maurer's work is of value and

<sup>73</sup> *Ibid.*, p. 147.

<sup>74</sup> *Ibid.*, p. 217.

<sup>75</sup> *Ibid.*, pp. 204, 205.

interest to the present study in describing the nature of the organizational personality and in reflecting the attitudes towards the corporate center of the business executives interviewed; but it cannot be regarded as an acceptable refutation of the idea of profits maximization as the goal of the business organization.

*F. An Application of Profits Maximization to Communications and Organizational Theories: A Simple Illustrative Model of the Modern Corporation*

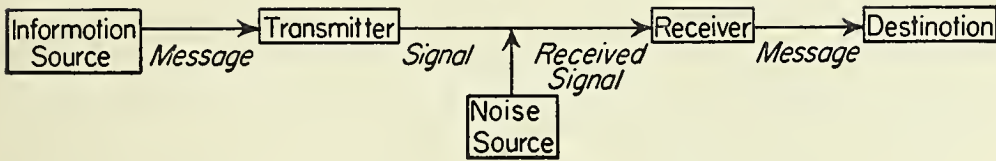
Use of organizational and communications theories in constructing models of the business organization has been given impetus by widespread dissatisfaction with the concept of the "entrepreneur." In focusing attention on the organizational features of the modern corporation, writers such as Barnard, Papandreou, Cyert and March, and Maurer have performed valuable service. On the negative side, they have shown clearly how inadequate the individual entrepreneur is as an embodiment of the risk-bearing, decision-making, and innovating functions within the sort of large firm which is typical in the concentrated sectors of industry today. On the positive side, each of the writers mentioned directly above has sought a description of an impersonal organization which can be substituted for the entrepreneur. Some such substitution, although current concepts of the organization vary, seems essential to any study of the modern corporation. The contributions made by the pioneers in this field are of great potential importance to any economist concerned with the nature of business firms today, and our debt to them, substantial at present, will increase with time.

Yet Barnard, Papandreou, Cyert and March, and Maurer all seem to be on rather weak ground in rejecting not only the concept of the entrepreneur but also the assumption of profit-maximizing behavior. By construction of a simple model, the combined use of the newer concepts of the large firm and the assumption of profits maximization may be illustrated.

Basic to this model is the generalized description of a communications system developed by Claude E. Shannon. Any communications system, Shannon notes, may be represented schematically as shown by the diagram below:<sup>76</sup>

<sup>76</sup> *Op. cit.* The non-mathematical reader may derive the most benefit from Warren





The information source is defined in terms of the amount of potential information it contains. A source may be anything from the entire universe to a single piece of “yes” or “no” type of information. The transmitter is regarded as any instrument which selects “bits” of information from the source, encodes the information, and transmits it.<sup>77</sup> Meaningful information is determined by the number of “bits” purposely selected and deliberately transmitted. Noise is defined as any extraneous, unintended, and non-meaningful information injected into the signal. The receiver receives and decodes the message; and the destination is simply whoever or whatever the message is intended to reach.

The efficiency of any communications system is measured by the quantity of meaningful information which is transmitted and received, the speed of transmission, and the system’s ability to exclude noise or to discard it from the received message. Shannon did not develop any method for measuring his fourth suggested criterion of efficiency of the system as a whole, the influence of the received message on the destination.

Shannon’s contribution is essentially mathematical. First, he has devised a general schematic presentation suitable for depicting any communications system. Second, he has developed a quantitative, measurable definition of information. And third, he has formulated criteria and methods for ascertaining the efficiency of any given communication system. Although Shannon’s work has proved extremely valuable in the design of communications equipment, his operational definition of information and his techniques for measur-

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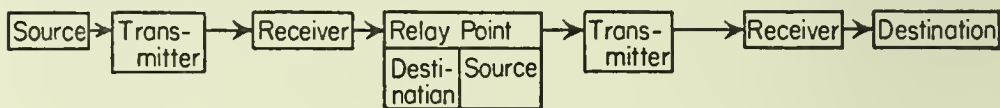
Weaver’s essay, “Recent Contributions to the Mathematical Theory of Communication,” attached to Shannon’s study as a supplement, pp. 94-117. Most of the following discussion of the generalized communications system is drawn from Weaver’s essay, with occasional resort to Shannon’s more technical work. See p. 5.

<sup>77</sup> An “instrument” may be a piece of machinery, a biological organ, or a human being. The term is deliberately non-specific. This observation applies to all components of the communications system.

“Bit” is a shorthand term which has been coined from “binary digit.” In Shannon’s system, a quantity of information is measured in terms of the number of “bits,” that is, yes or no, or 0 to 1, alternatives contained or transmitted.

ing efficiency have not yet been incorporated into economic models of the business firm. Yet his concept of the communications chain underlies analyses, such as those of Papandreou and Cyert and March, of the transmission of information and orders within a firm.

The communications system may easily be expanded into a communications chain or a communication network. A "relay point," such as used by Cyert and March, may be conceived of as a combination of destination and source. Schematically, with messages, signals, and noise omitted from explicit note in the diagram, a communications chain might appear as follows:



The chain may be made as long as is desired by adding more relay points. A communications network may be constructed by allowing any relay point to have several receivers or transmitters. Thus, a number of information chains might lead into or out of any given relay point. There is no reason to assume that a relay point has an equal number of receivers and transmitters.

Following Papandreou, a business organization may be described as having a communications network in which information flows up to decision-making units and orders flow down from them to operating units. The destination of information, then, is a decision-making unit. The destination of an order is an operating unit. One unit may be both a relay point and a decision-making unit. For example, a foreman, department head, or committee may have the responsibility for making certain decisions, issuing appropriate orders, and reporting each decision, including relevant portions of the information upon which it was based, to a superior unit. Or a unit may receive diverse information and decide how much of this information will be relayed further and in what form the information will be transmitted. For simplicity, let us assume the final destination of information to be Papandreou's "peak co-ordinator." Assume further, as does Papandreou, that the peak co-ordinator is the only decision-making unit within the firm. In a more elaborate model, the peak co-ordinator might be regarded as

exercising influence and supervision over subordinate decision-making units; but nothing essential to our present purpose is lost by regarding the information as flowing through a communications network up to the peak co-ordinator and orders as flowing down from the peak co-ordinator.

Recent writers on organizational theory have supplied useful insights into the study of such a communications network. Barnard has observed, for example, that in a business organization effective supervision of more than four individuals by any one individual is virtually impossible unless the people being supervised are performing nothing but routine tasks. Thus, any relay point with more than four receivers might be subject to suspicious examination. A very valuable use of committees may lie in their ability to overcome this limitation on the individual. Cyert and March, in proposing that information be distinguished according to whether it deals with cost, demand, or competitors' behavior and that chains and relay points be similarly distinguished, have offered an approach by which the appropriateness of specific chains within a network and the relay points along a chain may be assessed. Work by other social scientists on committee roles and decision-making processes, of the sort noted by Cyert and March, may be of great use in constructing more refined models; and the compendium of organizational hypotheses presented by March and Simon would appear to be essential for this purpose.

However, there are two assumptions which neither Papandreou nor Cyert and March made in their models which give the present model some slight claim to originality, if not to significance. First, we assume that the peak co-ordinator seeks to maximize the organization's profits. Note that the peak co-ordinator is regarded in his functional aspects, and not as an individual or a group of individuals. Second, the peak co-ordinator is assumed to have the power to modify the network—to change the channels through which both information and orders flow and to alter the number or composition of the relay points. The second assumption is the more crucial of the two. If we wished, we could easily substitute Baumol's assumption of sales revenue maximization subject to a minimum profit restraint for the first.

In the model, information flows to the peak co-ordinator. On the basis of the information received, the peak co-ordinator makes



decisions which are designed to maximize the firm's profits. As a result of the peak co-ordinator's decisions, orders flow down the communications network. Finally, the results of the actions which are taken in response to the orders are reported back to the peak co-ordinator.

For each decision, three results are to be noted. First, there is the predicted result, which is the result that the peak co-ordinator expects to come about after he has weighed received information and has transmitted his orders. Second, there is the actual result; and third, there is the reported result, which is drawn from information coming back to the peak co-ordinator in the form of reports on the actual result. For several reasons, these results may not coincide. The original information flowing up to the peak co-ordinator may be inaccurate or inadequate. The orders received by operating units may be distorted by the communications chains leading down from the peak co-ordinator. The actual results may not be reported back correctly to the peak co-ordinator. The peak co-ordinator, in this model, does not know actual results. He can only compare predicted and reported results.

If reported results vary substantially from predicted results, the peak co-ordinator will presumably take some action to modify the firm's communications network. He may feel that he made his earlier decisions on the basis of inaccurate information, or that he needs information which the present network is not supplying. He may believe that his orders are not being properly relayed to those who are to act on them. Or he may be skeptical of the accuracy with which actual results have been reported. The communications network will be in equilibrium only if it meets two conditions. It must relay the information and orders prescribed for it as smoothly and cheaply as possible; and reported results must approximate predicted results. Concern will be focused on the second of these two conditions.

The fact that the communications system is in equilibrium does not assure that the firm is operating efficiently. Predicted and reported results may be in close harmony, but both may diverge widely from actual results. Critics of totalitarianism have suggested that such a situation may be an inherent weakness in a dictatorial government. According to this criticism, the dictator is told what he wants to hear, not the truth, by apprehensive underlings. Possibly, a

similar situation could exist in a business organization, where members of the relay points have reason to be concerned for their jobs in a reorganization of the communications network.

The reported result may diverge substantially from the predicted result, and the former may be closer to the actual result than is the latter. Or, the reported result may diverge more from the actual result than does the predicted result, but with the actual result somewhere between those reported and predicted. In either case, action taken by the peak co-ordinator to change the communications network in order to bring predicted and reported results into closer agreement should lead to increased efficiency, with both reported and predicted results coming closer to describing actual results after the changes have been made.

However, it is conceivable that the predicted result might fall somewhere between the actual result and the reported result. If, in an effort to achieve greater agreement between predicted and reported results, the peak co-ordinator decided to modify the communications network, he would be quite likely to make changes which would worsen the efficiency of the organization's communications. After the changes, when predicted and reported results were in satisfactory agreement, both might be further from actual results than they were originally.

The equilibrium of the communications network, arrived at when predicted and reported results are close enough to satisfy the peak co-ordinator, may be an equilibrium in which actual results are far from the profit-maximizing predicted results. This equilibrium, further, may be stable until jarred by an outside shock. Such a shock might be a single momentous piece of information or the cumulative effect of numerous less vital pieces of information. If actual results are leading to loss rather than to any positive profit, the shock is assuredly coming sooner or later. An accounting concept of profit is most useful in recognizing the inevitability of this shock. The accountant regards profit as an increase in net assets (assets minus liabilities) and loss as a decrease in net assets.<sup>78</sup> Thus, protracted loss, although unreported,

<sup>78</sup> This concept of profits may be reconciled with the economic concept of profits by treating asset values as the present values of the discounted income streams attributable to those assets. Accounting practices and legal requirements do not yet permit such valuations on the books of a business firm.

will lead to a shrinkage of actual net assets, and such a shrinkage will eventually produce a shock which even the least efficient communications network will transmit to the peak co-ordinator.<sup>79</sup> Such a shock, most probably, would take the form of a cash shortage or inavailability of sorely needed new capital. The firm might find itself unable to meet current expenditures such as payroll, to meet interest and principal charges as they come due, or to replace worn-out assets.

In order for a communications network to be in a stable equilibrium, the firm must be breaking even or earning some slight profit. But as long as net assets are not shrinking, there is no necessary reason for change in the communications network. Competition, in this model, becomes a force for efficiency. In the case of the firm in pure and perfect competition or in imperfect competition, with an over-all long-run equilibrium position at which average cost is just tangent to average revenue, reported results cannot vary from actual results without producing the shock of loss. Yet a firm with some degree of monopolistic power may be producing and pricing anywhere within the range where average cost lies below average revenue, and there is no absolute assurance that the communications network will be modified so as to increase actual profits. The above analysis reinforces the oft-made observation that monopoly may misallocate resources not only through restriction of production but also through support of inefficiency. The shapes and positions of the firm's cost curves, and the height and elasticity of the demand curve facing the firm, giving the intersection points of the average cost and demand curves, will determine whether price policies or output decisions are most subject to *ex post* incorrectness, and will determine the extent of the peak co-ordinator's possibly sustainable errors.

It may be noted, in passing, that the above model could be used just as well as that of Cyert and March to explain the decline in market share of the dominant firm in a case of price leadership, if

<sup>79</sup> The firm's accounting system is an integral part of its communications network. Accounting problems, such as appropriate depreciation charges, inventory valuation, valuation of fixed assets, recognition of changing price levels, and bad debt policy, are usually solved by accounting convention, estimates, and rules of thumb. The accounting system, therefore, is subject to interpretation, may contain serious inaccuracies, and may be modified in much the same fashion as any other component of the communications network.



we are willing to assume that the price leader possesses a greater degree of monopoly power than do the followers. Such power might sustain errors in the strategic area of price selection for many years, while smaller firms would more quickly receive corrective shocks if they did not respond to the leader's price with the most profitable quantities. Sustainable error as well as organizational slack can explain observed facts as to firms' reactions to adversity, and the former seems to be a more logical assumption.

The implications of the model may also lead to an understanding of Maurer's corrective competition. A large firm which is aware of possible divergences between actual and reported results will be extremely anxious to compare its performance, in terms of market share and various financial ratios, with that of similar firms. In this context, Shannon's concept of redundancy is important. Shannon noted that one way to overcome noise is to make a message deliberately redundant. The cost of repetition or of acquiring corroborating information from several sources, in comparison with the benefit to be derived from more accurate and reliable information, leads to an economic problem to be faced by the peak coordinator in designing and modifying the firm's communications network.

The major purpose in presenting this simple model, however, is merely to illustrate the fact that profits maximization and marginalism are not incompatible with newer theories of communication and organization. Rather, to the contrary, the old and the new may be consistently and usefully combined.

## *Chapter Seven: CONCLUSIONS*

There are two major themes which give some continuity and sense of evolution to the literature on business concentration reviewed above and through which changing concepts of the large firm can be seen. The first of these is continuing critical investigation of the most fundamental tenets of economic thought. The second is the effort to add relevance to economic theory, primarily by the introduction of hypotheses or assumptions designed to be consistent with the facts of modern business organization. Both of these themes run in virtually unbroken fashion through the literature and remain vital, even dominant, in the present development of economic analysis of business concentration and monopoly.

In tracing the examination of basic principles, we have seen how the doctrine of laissez faire came under careful scrutiny and was abandoned. With this abandonment one of the most futile debates in the early trust literature, a debate over the naturalness of the trust movement, came to an end after it had absorbed the time and energy of many prominent and able scholars. The question was never finally settled; rather it was discarded as unimportant when "naturalness" was no longer automatically equated with "goodness." Next, critical attention was focused on the value and efficiency of competition as a social regulator of economic activity. Competition as a valid and important economic principle survived the attack of the 1930's, but its delineation by the end of that decade had been expanded to include the concepts of workable and dynamic competition.

Efforts to add realism to the content of economic theory have typically taken the form of new assumptions or new techniques rather than fundamental revision of the theory. This observation holds true of J. M. Clark's work on the economics of overhead cost, Joan Robinson's on imperfect competition, Chamberlin's on monopolistic competition, mutual dependence, and product differentiation,

F. A. Fetter's on pricing systems, and Triffin's on cross-elasticities. The most important contributions which question the usefulness of traditional, static, partial equilibrium theory, such as those of Schumpeter and Galbraith, are nevertheless specifically described by these authors as supplementary rather than contradictory to the older approach.

These two themes are not independent, but have interacted upon each other. For example, the attack on laissez faire and the debate over naturalness inspired a demand for realism in the study of the trusts which was effectively voiced in J. B. Clark's 1901 work, *The Control of Trusts*. This demand is also shown in the insistence at the American Economic Association's 1913 meeting that the gains in efficiency claimed for the trust movement be thoroughly investigated. In his sweeping rejection of competition as a workable economic regulator, A. R. Burns subjected current business practices to a systematic and thorough empirical review.

Both of these themes are highly important today. We have reviewed, in some detail, the controversy surrounding the assumption of profits maximization. This assumption is so fundamental to economic theory that it deserves rank with laissez faire and competition as a basic underlying tenet, unlike assumptions such as degrees of information and mobility which may be modified or relaxed in order to bring relevance to the theory in a specific problem. The questioning of profits maximization has raised debate on issues such as the pecuniary motivations of individuals and their abilities and desires to behave in a maximizing fashion. If the organization is used as the maximizing unit, such debate will seem just as unnecessary as the debate on naturalness raised by the attack on laissez faire. Dispute and investigation should continue as to whether profits maximization is the actual goal of business organizations; but as concern is transferred from the motivations of individuals to the motivations of the organization, the non-pecuniary or non-rational behavior of individuals becomes a problem in industrial psychology and business administration, rather than an argument for a fundamental reformulation of economic theory. Such behavior can be looked upon as an obstacle to the organization's goal; and efforts to remove or lessen the obstacle, for example promotion of loyalty to the company and the development of the committee system, can be treated as costs involved in the function of the organization.



In assuming, as a working hypothesis, that the corporate organization is designed in order to maximize its own profits, it has been necessary to conceive of a corporate entity, the organization as an identifiable thing, separate from the individuals who created it, own it, direct it, and supply it with its activities and forces. Such an abstract entity, clearly, is the product of the persons who are its members, and exists for conceptual purposes only, in the minds of its members or as the construct of a student. Yet the "company" most certainly exists and can be identified by the influence which it exerts. Without company philosophy and widespread company loyalty, the complex, decentralized large firm of today would not only be inexplicable but would probably cease to exist; it is, at least, not organized to serve the personal goals of any individual. Maurer's interviews show clearly, almost startlingly, how businessmen recognize the corporate personality and even, in some cases, seek to subordinate their own personalities to it. Therefore, it would seem reasonable for the economist to adopt the concept of the organization as a unit with goals and motives of its own, even though such a concept must remain a convenient fiction to one who is not metaphysically inclined. This idea should not be alien to social scientists, who have long recognized that in any social system the whole may be different from the sum of its parts.

Business structure continues to develop and change. As it does, so must the nature of the assumptions upon which economic theory is based. Work in communications and organizational theories is essential to an understanding of the modern, large, multi-plant, multi-product, decentralized or departmentalized business corporation. Yet some of the assumptions made in using these theories are questionable. Cyert and March, for example, accept the assumption that the subunits within a business organization will have goals of their own which will result in business behavior that is a compromise between the goals of these subunits and the goals of the organization as a whole. Our concept of the large firm would suggest that such an assumption is incomplete or even incorrect without a further assumption that the organization will be designed in such a manner as to bring the subunits' goals into harmony with its own or to suppress and eventually modify them. Further, assumptions that once served the purpose of bringing theory into accord with business reality may have to be discarded.

Thus, the possibility of a downward-sloping supply curve was suggested by Ely and Fisher, among others, as a partial explanation of the early trust movement. This suggestion was of importance in distinguishing areas of the economy which might function better under public regulation from those in which a policy approach designed to promote competition might be more appropriate. But investigations of the efficiencies which the combinations purported to achieve and more recent empirical studies of actual firm and industry cost functions have indicated that this assumption is of limited, if any, use in studying the modern large corporation from the point of view of present antitrust enforcement.

Continuing critical examination of the bases of economic analysis and continuing efforts to formulate hypotheses and assumptions in keeping with business reality are essential if economics is to contribute to public policy. At present, in so far as antitrust enforcement is concerned, work along these two traditional lines seems more important and useful than work proposing a new approach to problems of the large firm and a consequent scrapping of most of the insights of the earlier literature.

It is possible to use extremely broad definitions of competition and monopoly in analyzing the modern corporation. In considering the contribution that an economist can make to antitrust enforcement, we must remain aware that competition and monopoly have narrower meanings in the law and that the nation's antitrust policy is based on more than economic considerations. Nevertheless, it is clear that monopoly and competition are essentially economic concepts,<sup>1</sup> and that the economist should be able to identify the presence or absence of monopolistic power in any given case. Whether or not such identification justifies legal action against a firm may hinge upon non-economic factors.

In the recent Tobacco case the Supreme Court approved the trial judge's definition of the term "monopolize," which the judge stated implied the "power to control and dominate interstate trade and commerce in a commodity to such an extent that they are able, as a group, to exclude actual or potential competitors from the field, accompanied with the intention and purpose to exercise such

<sup>1</sup> For emphasis on this point, see J. W. Markham, "Economics and Antitrust Law Administration," Emory University Law School, *Journal of Public Law*, IV, no. 1 (1955), 127-137.

power.”<sup>2</sup> The trial judge carefully qualified his definition, noting that it was applicable only to the use of the word as it appeared in section 2 of the Sherman Act; but the important points to be noted here are that the Supreme Court approved a legal definition which limited monopoly to a “commodity” and required “intention and purpose.” Thus, it appears that under present law and legal interpretation, an economist’s showing that a firm possessed monopolistic power in its labor market or in an aggregation of patents would not suffice to prove a violation of the antitrust laws unless it could also be shown that these positions of power were consciously related to an attempt to monopolize a commodity market.

The social objectives or goals of writers in the field of business concentration have changed over time. Those who opposed the trusts at the turn of the century did so on the grounds that the trusts restricted the opportunities of individuals to enter the controlled fields of business endeavor, destroyed the independence of existing businessmen, and achieved control of such great parts of the supplies of certain commodities that they were able to raise prices to extortionate levels. The goals, then, in opposing the trust movement, were freedom of enterprise and low prices. The proponents of the trust movement argued that, because of the wastes of competition and economies of scale, the trusts should be able to achieve savings in operating and selling expenses and that, because business crises were caused by overproduction and glutted markets, the trusts could make a social contribution by planning production and avoiding surpluses. Thus they regarded productive efficiency and business stability as proper goals of economic policy. Although the literature of economic theory was explicit in rejecting privately planned restrictions of production as a remedy for business fluctuations, and subsequent empirical work cast doubt on the efficiencies of combination, it should be noted that different goals led to different approaches to the trust problem and that these approaches were not necessarily contradictory at the time.

Differing social objectives remain today as extremely important factors in explaining diverse policy recommendations of students of business concentration. These objectives, however, appear to be on firmer theoretical bases than were goals such as efficiency and business stability. Those writers who are not concerned with the

<sup>2</sup> *American Tobacco Company et al. v. U. S.*, p. 785.



present state of concentration of business activity in the United States and who are hostile or indifferent to vigorous antitrust enforcement have, in the main, goals which are consistent with current economic theory. One cannot demonstrate, by the use of any reasonable model of the large firm, that the dynamic goals ascribed to a concentrated economy will not be forthcoming. Therefore, although a student of antitrust problems could castigate or ignore the work of A. J. Eddy as being economically naïve or even illiterate, the writings of the modern proponents of an economic order dominated by big business, such as Berle, Glover, and Lilienthal, must be accorded respect and attention, even though the authors are not trained economists. On the other hand, there is a body of economic theory which remains applicable to present business structure and which maintains that the goals of those who advocate an expanded program of antitrust enforcement would be achieved in an industrial structure of smaller, strictly independent firms.<sup>3</sup>

There seems to be at least one exception to the above observation. Some writers have maintained that the giant firm, with its complex organization, its teamwork developed from long experience, and its accumulated research talent and facilities, is essential to effective national defense and the ability to convert rapidly to wartime production. This position appears to be questionable. The government, rather than large private firms, would seem appropriately to exercise the function of establishment of the necessary organizations, particularly since the purposes of such organizations differ vastly from the profits-maximizing purpose of business organizations. A national defense or wartime organization, whether developmental, such as the Manhattan District, or an agency awarding contracts and co-ordinating production among private firms, should not be sensitive to market pressures but rather should operate to fulfil a specified assignment in which cost is not of overriding importance and in which profit has no meaning. If the government can fulfil the organizing and co-ordinating tasks, since without expressed con-

<sup>3</sup> A persuasive argument that J. B. Clark and Alfred Marshall, taken as leading examples of pre-Chamberlinian economists, were fully aware of dynamic factors such as those stressed by Schumpeter and the present-day defenders of big business is presented in Shorey Peterson, "Antitrust and the Classic Model," *American Economic Review*, XLVII, no. 1 (March, 1957), 60-78. Peterson notes that economists have long been aware of the limitations of static theory as a guide to public policy; and he suggests that, in the sphere of policy proposals, goals have changed much more than techniques of analysis.

sumer preference the market cannot do so, there should be no need for reliance on giant firms to develop and maintain the nation's military capabilities.

We have noted the relative lack of economic criteria in the formulation of the antitrust laws and the subsequent development of antitrust policy. Two major reasons can be given for this failure of economists to influence the law and its enforcement. First, economists showed little interest in the antitrust laws until well into the second decade of the twentieth century. Second, the Sherman Act was not solely or even primarily a piece of economic legislation.

Although great interest was shown in the trust movement, economists of such diverse opinions as J. W. Jenks and R. T. Ely could agree that the Sherman Act and state antitrust provisions were futile or harmful. Those who believed that the trusts were natural economic phenomena opposed the antitrust laws as attempts to check industrial evolution. Those who were of the opinion that the trusts were creatures of special privilege advocated the removal of privileges such as lax corporation laws, tariff protection, and unduly generous patent grants rather than antitrust legislation. Only after the question of naturalness became unimportant and after economists were convinced by the 1911 dissolutions of Standard Oil and American Tobacco that the antitrust laws were amenable to effective enforcement, was there any widespread professional interest in the laws.

Non-economic considerations were of importance in the passage of the Sherman Act. The Congressional debate indicated that the legislators were concerned with the political power of the trusts, notably their potentialities for corrupting both government officials and their own employees, the decline of opportunity for enterprising individuals, inequities of income distribution resulting from excessive profits of the promoters and financiers, and the price gouging of both consumers and suppliers. Only the last two of these can be considered as economic evils. The solution to the problem of income distribution was not accomplished through antitrust enforcement but through progressive personal income and estate taxes. In the debate, little was said about restriction of output except to argue that the trusts might perform a public service in checking overproduction.

We have reviewed the T. N. E. C. evidence and findings and have argued that the results of the investigation were virtually useless for the formulation of an economically sound antitrust program. The non-economic problem of the ability of political democracy to survive in an economy dominated by big business was raised often both by members of the Committee and by authors of the monographs, accompanied by numerous allusions to fascist Italy and Nazi Germany. There was only one attempt to investigate this political problem in a scholarly fashion, and that study was confined to the activities of pressure groups in this country. The major economic indictment of big business was that it was somehow responsible for the depression of the period. The economic evidence brought forth to substantiate this accusation was thoroughly unsatisfactory.

Economists who are interested in current problems of antitrust enforcement should keep in mind that there are important non-economic aspects of the laws and of their enforcement. Without such an awareness, the economist may be relatively ineffectual in assisting either law-makers or administrators. Rejection of strictly economic criteria of competition and its social benefits is evidenced in the exemptions from antitrust laws granted to labor and to agriculture and in the protection of small businessmen from the full force of competition embodied in the Robinson-Patman, Miller-Tydings, and McGuire Acts. Evidence of non-economic factors of a different sort in antitrust enforcement is found in Judge Hand's comment in the Aluminum case of 1945 that Congress had other than economic goals in mind in enacting the Sherman Act and in fostering competition.

The perspective gained from a study of the evolution of economic concepts of the large firm and of its functions in an industrial, free-enterprise society is of value in understanding the role that the present-day economist can play in shaping antitrust policy and in contributing to its enforcement. Further, cognizance of the non-economic factors involved in the growth of antitrust policy is essential to any evaluation of the current state of the antitrust program. In order to understand and in some measure to guide the future development of antitrust policy, it is necessary to appreciate not only its present state but its development over time. Such a statement is made so frequently in justifying any historical study



as to appear trite, but the truth and validity of the statement is convincing in connection with the economic contributions to the antitrust program which this study has attempted to assess. The basic problems and promise of future development of economic analysis in this field still arise from the critical analyses of primary tenets and from the formulation of more useful and valid assumptions and hypotheses. Past differences in social goals, and the controversies and failures to communicate arising therefrom, have definite modern parallels and can serve as warnings to today's students to be explicit in defining their objectives. Techniques and insights throughout the literature remain most useful and should not be discarded by those who find themselves perplexed while facing immediate issues and given industrial problems demanding specific solutions.

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